MUNIPAY USER'S MANUAL

Multimedia Enforcement Division (2248-A)
Office of Regulatory Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460

September 1999

ACKNOWLEDGEMENTS

This document was prepared under the technical direction of Jonathan Libber, BEN/ABEL Coordinator, Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency (EPA), with additional input provided by Leo J. Mullin, while on detail to the Policy and Program Evaluation Division, Office of Site Remediation Enforcement, U.S. EPA. Technical assistance was provided to EPA under contract by Industrial Economics, Incorporated (IEc) of Cambridge, Massachusetts.

MAILING LIST ADDITION

If you would like to receive updated materials, and you work for a Federal, State or local government environmental agency, please e-mail your name, government mailing address, and government phone number to benabel@indecon.com. If you have any questions about updates, contact the EPA enforcement economics toll-free helpline at 888-ECON-SPT (326-6778).

If you are a member of the public and would like to obtain these materials, download them from the U.S. EPA's web site at http://es.epa.gov/oeca. (This address may have changed by the time you read this manual. To obtain the current address, you can call the helpline at 888-ECON-SPT.)

TABLE OF CONTENTS

TABLE OF CONTENTS
(continued)

TABLE OF CONTENTS
(continued)

LIST OF EXHIBITS

TABLE OF CONTENTS
(continued)

LIST OF EXHIBITS (continued)

A. OVERVIEW

In environmental enforcement cases, the defendant/respondent may claim an inability to afford compliance costs, a Superfund cleanup contribution, and/or a penalty that the U.S. Environmental Protection Agency (EPA) seeks (hereafter called "environmental expenditures"). The ABEL model has long been available to enforcement staff to evaluate the financial health of corporations, and the more recently developed INDIPAY model evaluates individuals' finances. The Municipal Ability to Pay ("MUNIPAY") Model provides the analogous role in evaluating the financial status of municipalities.

The MUNIPAY Model evaluates the economic and financial condition of municipalities. This includes towns, villages, cities, and counties of any size, and even independent and publicly owned utilities (e.g., regional wastewater treatment plants). MUNIPAY provides a consistent and theoretically sound framework for evaluating municipal affordability cases. MUNIPAY performs two separate sets of analyses: a demographic comparison, and an affordability calculation.

The demographic analysis uses U.S. Census data from 1980 and 1990 to compare the municipality to state and national norms. The comparison includes indicators for both the community's population and income. The analysis also shows how the municipality's position has changed over time, both relative to itself and relative to changes in the national norms. The demographic analysis does not give the user a specific conclusion on the municipality's demographics, but instead provides a better understanding of long-term changes in the community's resource base.

The affordability analysis involves calculations for the amount of currently available funds and then, if necessary, the amount of funds available through financing. The currently available funds calculation looks for any excess monies in the municipality's "General Fund" balance and, if applicable to the case, its "Enterprise Fund" working capital balance. If currently available funds are not sufficient to pay for the environmental expenditures, the affordability analysis then assesses the municipality's current debt burden and its ability to take on additional debt to finance the

environmental expenditures. Both sets of calculations have a solid grounding in the academic and professional literature of fiscal management and public finance.

Despite MUNIPAY's ability to provide a point estimate of the municipality's level of affordable expenditures, municipal affordability cases still require the user's best professional judgment. MUNIPAY does contain default values for certain parameters such as the maximum incremental tax burden from the environmental expenditures, but the user must still decide whether those default values are appropriate for the particular case. The model can help with these judgments, but final determination of the municipality's affordability ultimately is a decision only the enforcement professional can make.

Finally, although MUNIPAY is a sophisticated screening tool that can greatly assist enforcement professionals in evaluating municipal affordability claims, MUNIPAY by itself is not appropriate for use at a trial or in an administrative hearing. Rather, it is principally for use in settlement negotiations. If affordability testimony is to be presented at trial or in an administrate hearing, an expert should provide an independent financial analysis.[1]

B. HOW TO USE THE MANUAL

This manual provides instructions for using the MUNIPAY Model. These instructions illustrate the model by using a hypothetical municipality as an example and show a typical model run step-by-step.

Chapter 2 describes how to use MUNIPAY. Chapter 3 defines each input you will need to evaluate a municipality's ability to pay. Chapter 4 describes the results and output from the model and explains how to change input values for subsequent runs.

Help information is available in the program if you need a variable defined, guidance on information sources, or help with the format required for an input entry. To access help, simply click on the "Help" button at the base of each screen or press the F1 key. If you need assistance in operating the program or understanding the results, please contact the U.S. EPA enforcement economics toll-free helpline at 888-ECON-SPT (326-6778) or benabel@indecon.com. If you need legal or policy guidance, please contact Jonathan Libber, the BEN/ABEL Coordinator at 202-564-6102 or e-mail him at libber.jonathan@epamail.epa.gov.

[1] For assistance with the selection of an expert on financial economics analysis, enforcement staff should contact Jonathan Libber, the U.S. EPA BEN/ABEL coordinator, at 202-564-6102 or libber.jonathan@epamail.epa.gov.

The Municipal Ability to Pay Model ("MUNIPAY") is an interactive computer program that runs on IBM-PC compatible computers in the Windows™ environment. This chapter presents an overview of procedures for using MUNIPAY to evaluate a municipality's ability to afford environmental expenditures. For a detailed guide to constructing and selecting cases and to running demographic and affordability analyses, see Chapters 3 and 4 respectively.

Chapter 2 contains five sections. Section A describes the computer program's structure, and provides an overview of the choices that MUNIPAY presents during program execution. Section B explains the procedures for starting the program on your computer. Section C provides data format requirements and additional helpful hints for entering data. This section also illustrates the error messages the model provides if you fail to enter data properly. Section D explains the procedures for ending the program. Section E provides an overview of the different options for printing and exporting your results.

A. STRUCTURE OF THE PROGRAM

1. Overview of the Model

As discussed previously, MUNIPAY performs two different analyses: a demographic comparison, and an affordability calculation. The two sets of analyses operate independently of one another, and therefore you can run just one of the analyses if you desire.

The demographic analysis uses U.S. Census data to compare the municipality to state and national norms. The user must enter the data for the municipality; MUNIPAY already contains databases for national norms and all 50 states. The comparison requires no other inputs, and displays its results in a single table. The demographic analysis does not give the user a specific conclusion on the municipality's demographics, but instead provides a better understanding of long-term changes in the community's resource base.

The affordability analysis assesses the amount of currently available funds and then, if necessary, the amount of funds available through financing. The user can accept MUNIPAY's default values for the run parameters, or customize them. The currently available funds calculation looks for any excess monies in the municipality's "General Fund" balance and, if applicable to the case, its "Enterprise Fund" working capital balance. If currently available funds are not sufficient to pay for the environmental expenditures, the affordability analysis then assesses the municipality's current debt burden and its ability to take on additional debt. MUNIPAY displays a summary table for the affordable level of environmental expenditures, plus other tables detailing the municipality's current condition and the projected financial impact from the sought and affordable level of expenditures.

2. Data Requirements

Before you use MUNIPAY, the municipality must complete the appropriate data request form.[1] For the purposes of data entry and analysis, MUNIPAY divides municipalities into three different types, and provides different data request forms corresponding to each type. Chapter 3 provides examples of these forms and an explanation of the different municipality types. Once you have obtained the completed form from the municipality, data entry is relatively quick and easy.[2]

3. Overview of Computer Program

This section describes the program's structure. Chapters 3 and 4 provide a detailed explanation of each individual screen's content.

The model operates in the Windows™ environment. Each screen prompts you for specific information and will not allow you to continue until you respond to the prompts. Within each screen you can enter information in any order you wish, and make necessary edits. Once you complete each screen, click on the "Continue" button at the bottom of the screen to continue with the program. You can leave the program at any point by clicking on the "Exit" button at the bottom of the screen.

Once you access the model, the first screen will prompt you for your name, your EPA Region (which you must select using the scroll bar), and where you would like to store output files. Do not save your output to the same directory that contains the MUNIPAY program files. Instead, designate

---

[1] See Appendix C or print the data request form directly from the model by clicking the "Data Form" button at the right of MUNIPAY's main screen.

[2] If you are uncertain of which data form to provide, an alternative approach is to request that the municipality complete both forms. Also, if the municipality for some reason refuses to provide data, or delays excessively, you might be able to obtain the municipality's financial statements from a commercial provider. (One such provider is available on the internet at http://www.dpcdata.com.)

a separate directory for your output. Exhibit 2-1 provides an example of the user "Fred Red" who has created a subdirectory "MUNIRUNS" within his EPAMODS\MUNIPAY directory. During future model sessions MUNIPAY will display your prior entries as the default. You can simply click on the "Continue" button to accept these entries or use your mouse and keyboard to edit them.

Exhibit 2-1

INTRODUCTORY WELCOME SCREEN

The next screen represents the "main" screen of the model — here you select a case to examine, begin data entry or data editing, and undertake a demographic or affordability analysis. You will return to this screen after you complete a given task, such as data entry or editing.

After you determine whether the case is existing or new, you are ready to enter or edit case information. For a new case, MUNIPAY will prompt you for basic case information: the municipality's name, state, and entity type. From the main screen, you then select the Enter/Edit button for either census or financial data. After completing data entry you can proceed to the right-hand side of the screen for performing analysis runs, selecting either the affordability or demographic analysis options. The affordability analysis requires you to create named runs, which allows you to vary run parameters and save different sets of results. By contrast, the demographic analysis requires

no run parameters and is far less complex, therefore offering only the single option of running the analysis.

To access an explanation of the information MUNIPAY requires at any point during your use of the model, simply press F1 or click on the "Help" button, which is available in most of the model's input and output screens. The help screens provide context-sensitive help, including information pertaining both to running the model and understanding and interpreting the model's input and output values.

MUNIPAY displays the results of your demographic and affordability analyses on your computer screen and automatically saves all results for later printing or for further modification. You can print either summary results only, or all of the detailed exhibits. When you are finished, you can choose to run the program again or end the program session. If you run the program again, you can change one or more of the data inputs from your previous run, or create entirely new runs for the same case using different run parameters. You can then recalculate the affordability analysis without having to reenter all of your input values. Chapter 4 describes these procedures in more detail.

B. GETTING STARTED

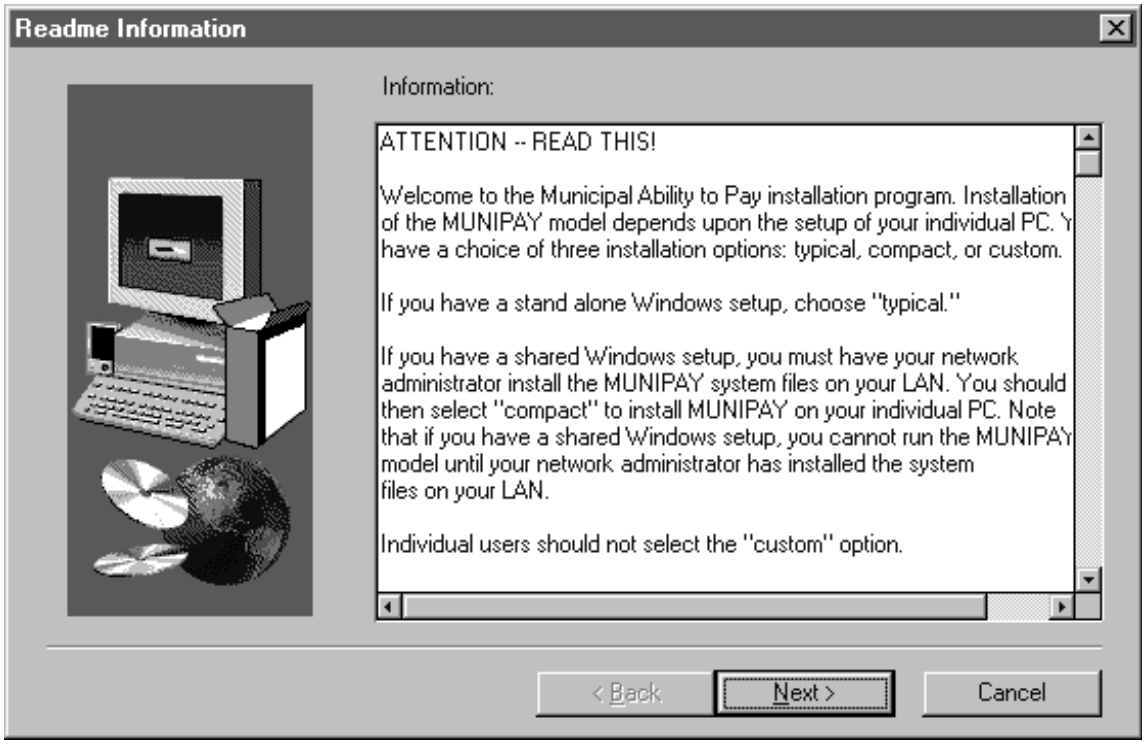
MUNIPAY requires a personal computer running the Windows operating system (version 3.1 or higher). In addition, for optimal formatting of various data entry screens, set your display in the control panel to "small fonts" option. ("Small fonts" is the Windows default, so unless your display settings have been altered, your computer should be set appropriately.)

To install the model, first close all applications. Then, either run the file with the "exe" extension that you downloaded from EPA's web site, or run the file "setup.exe" found on the first

of the two installation disks. (If you receive a warning message that you cannot copy a file because it is in use, simply click "OK." It is merely notifying you that the file the installation system is trying to copy already exists on your computer and is currently open.)

The first MUNIPAY setup screen will appear as shown in Exhibit 2-2. Before beginning you will be asked to read a short explanation about the installation options. PLEASE READ THIS SCREEN BEFORE PROCEEDING WITH INSTALLATION! MUNIPAY requires several different installation options because computer support staff in EPA regions as well as state agencies can choose to setup their LANs in several ways. In most regions, you will have all of your system files located on your own individual PC. If this is the case, you should choose "typical." Alternatively, in other regions, your system files may be located on your regional LAN. In this case, you cannot overwrite the system files during the installation process as required for the MUNIPAY model to load. You should install the "compact" option to your computer and acquire assistance from your computer support staff to install the system files on your LAN. You should contact your computer support staff to determine which Windows setup is used in your region. For more information, please see the instructions illustrated in italics below.

Exhibit 2-2
"MUNIPAY INSTALLATION - FIRST SCREEN"



Installation of the MUNIPAY model depends upon the setup of your individual PC. You will have a choice of three installation options: typical, compact, or custom. No one should ever select "compact." If you have a stand alone Windows setup, choose "typical." If you have a shared Windows setup, you must have your network administrator install the MUNIPAY system files on your LAN. Once you have been notified that the administrator has installed these system files, you should then select "typical" to install MUNIPAY on your individual PC. Note that if you have a shared Windows setup, you cannot run the MUNIPAY model until your network administrator has installed the system files on your LAN. Individual users should not select the "custom" option.

If you do not know the type of Windows setup that is installed on your individual PC, please seek help from your network administrator.

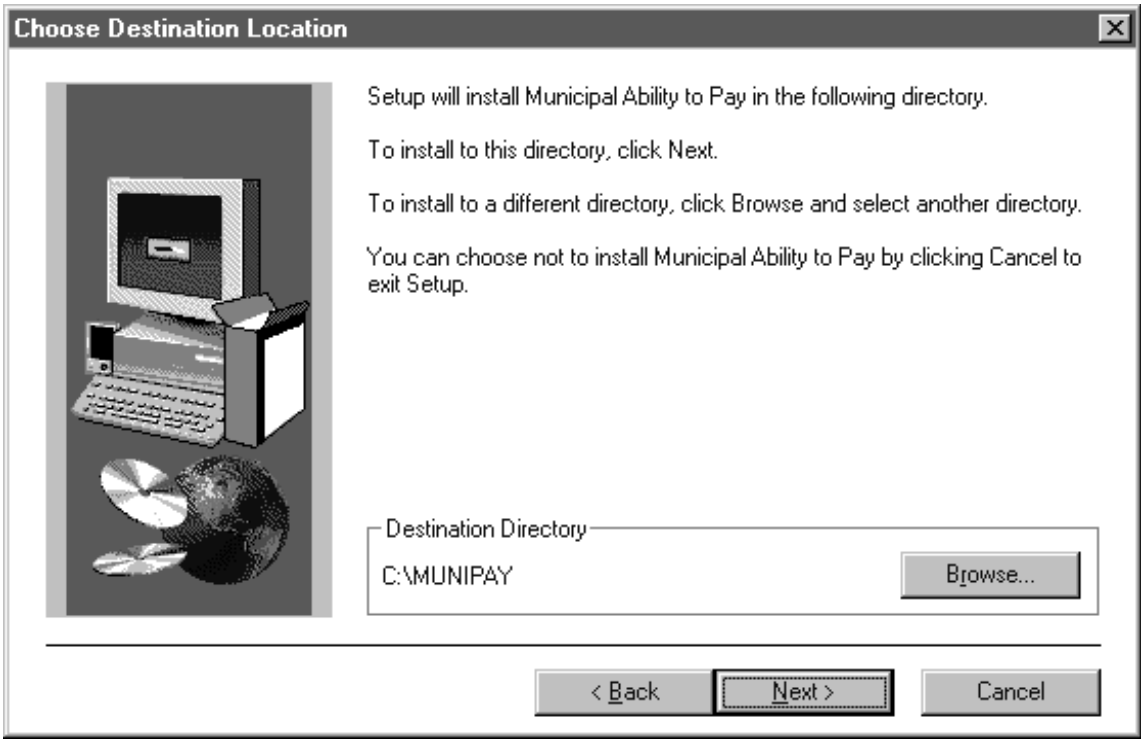
If you are a network administrator, select the "custom" installation option. You will then be given a choice to install program files, system files, or all files. If your network setup is shared, you MUST install the system files to the LAN to enable your users to run MUNIPAY. Verify the file dates and versions against the list provided in the Administrators' Instructions and notify users that they may proceed with the installation. You may also choose to install the program files on the LAN to allow for easier distribution of the model. If you install the program files to the LAN, please make sure that your users have full access to the directory in which MUNIPAY is stored.

If you have any questions about the installation of the MUNIPAY model, please call EPA's Economic Support Helpline at (888) ECONSPT.

After you finish reading the installation instructions, please press "Next." The second setup screen will appear as shown in Exhibit 2-3. You will also be asked to designate a directory in which to store the model. The default directory is "c:\MUNIPAY" (assuming that your local hard drive is c:\). If you wish to save the model to a different directory, select the browse key and click on the appropriate directory. It is extremely important that you not enter a root directory (e.g., c:\ or f:\) here; you must specify a subdirectory (e.g., c:\MUNIPAY). If the directory you specify does not exist, MUNIPAY will create it for you.

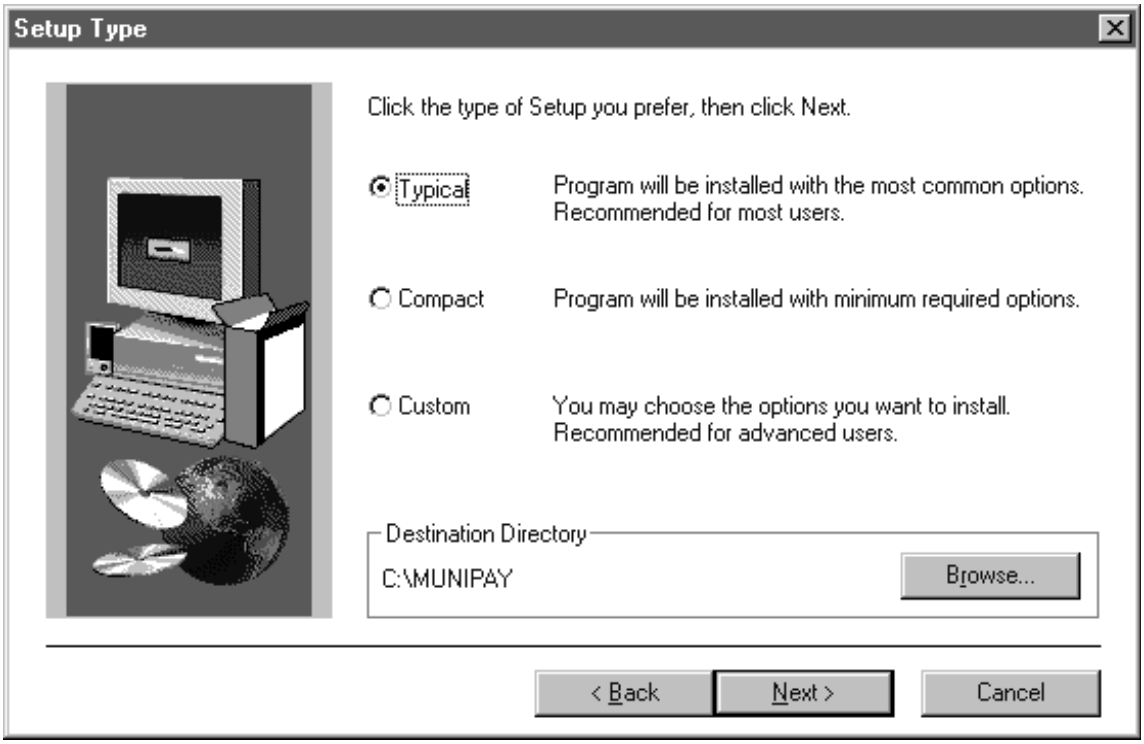
Note that you also have the option of returning to the previous screen by selecting "Back" or to exit the installation program entirely by selecting "Cancel." If you select "Cancel" at any time during the installation process you will receive a message telling you that installation is not complete. This option allows you to install the program later.

Exhibit 2-3
"MUNIPAY INSTALLATION - SECOND SCREEN"



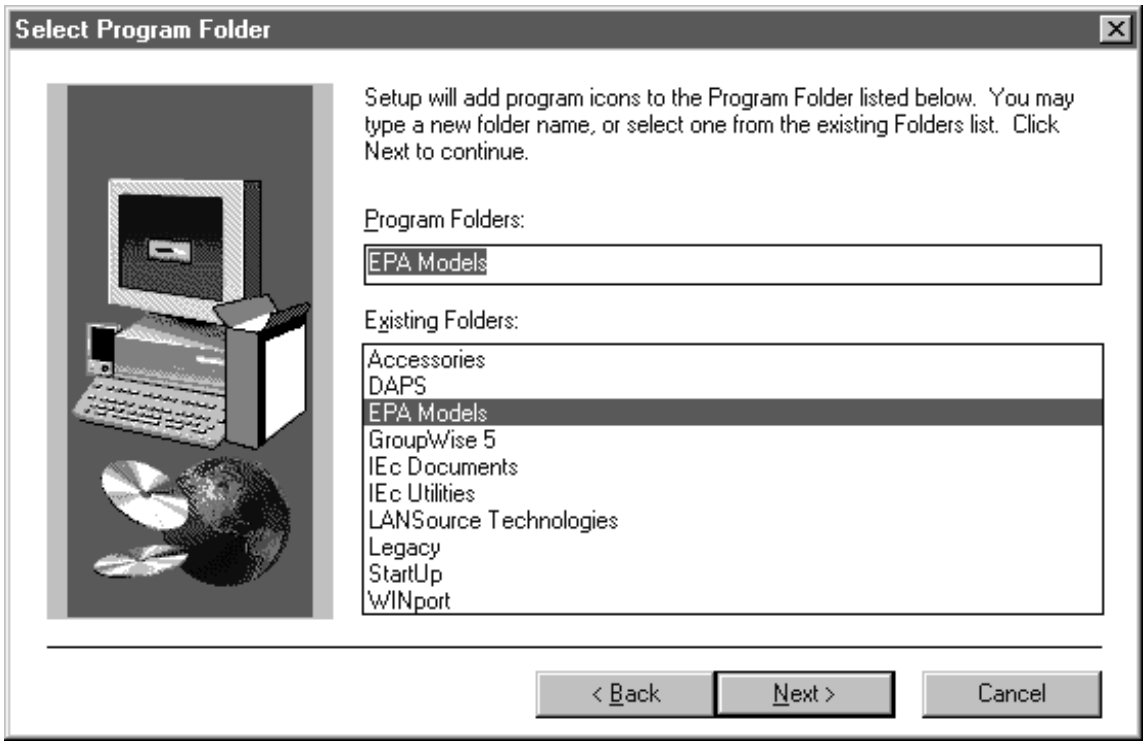
On the third screen, you will be asked to specify a setup option. You should make your decision using the italicized text outlined above, as well as assistance from your computer staff in some cases.

Exhibit 2-4
"MUNIPAY INSTALLATION - THIRD SCREEN"



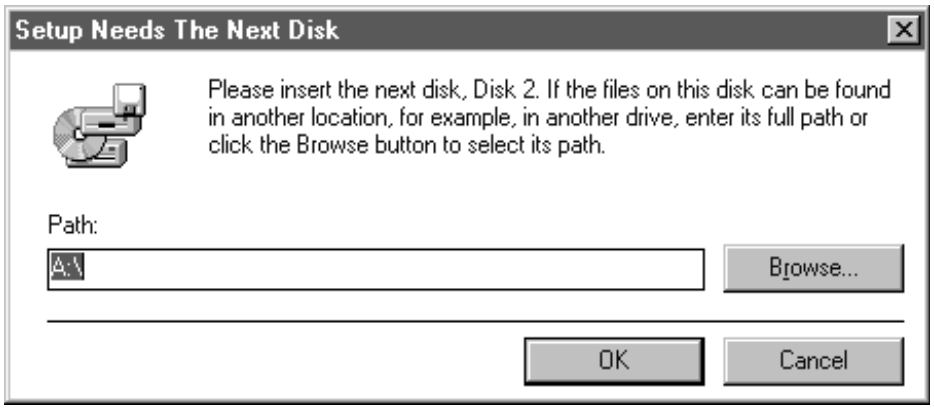
After selecting "Next" on the third setup screen (i.e., Exhibit 2-4), the fourth setup screen will appear, as shown in Exhibit 2-5. This screen allows you to designate the Program Folder (or Program Group if you are running Windows™ 3.x) in which you would like the MUNIPAY icon to reside. The default folder that the model creates for you is EPA Models. You may also choose to install the icon to an alternative Folder (or Group) such as MUNIPAY. After selecting the appropriate Folder (or Group), press "Next."

Exhibit 2-5
"MUNIPAY INSTALLATION - FOURTH SCREEN"



After selecting "Next" on the fourth setup screen, you will be asked to insert Disk 2, as shown in Exhibit 2-6. The "path" displays the location of the MUNIPAY installation disk and *not the directory in which your model will be stored*. For example, in this case the installation disks are located in the a:\ drive.

Exhibit 2-6
"MUNIPAY INSTALLATION - FIFTH SCREEN"



The program will display a completion notice after all of the MUNIPAY files have been copied to your hard drive. When you have completed the installation process, you should reboot your computer prior to using the MUNIPAY model or any other software package on your computer. Once MUNIPAY has been loaded onto your hard drive, simply double-click the model icon to start the program.

After installing the model, you may wish to create a subdirectory for storage of your case files. You may also choose to store your case files in a pre-existing directory as MUNIPAY case files will not alter any other files stored in that directory (e.g., WordPerfect files, Excel spreadsheets). *Note that you must save your case files in a directory that is different from the directory in which the model is stored.* For example, if the model is stored in "c:\MUNIPAY," you may wish to create a directory titled "c:\MUNIPAY\cases" for storage of your case files.

C. MODEL ATTRIBUTES

The following sections illustrate the key attributes of the model, including the general features common to every screen displayed in the model, format of data entries, the help system, how to correct entry errors, and error messages generated by the model. (Chapter 3 provides a complete description of all of the screens.)

1. General Features of the Model Screens

The monitor displays input windows and then waits for you to enter information in the appropriate sections of the window, or to edit existing data. The prompt for information will either describe the data you need to enter or ask you a question. In both cases, you can move directly to the input item you need to enter or change by using your mouse or tab key. You must enter certain

required information before the program will allow you to proceed to the next window. If you click the "Continue" button at the bottom of the screen before entering required information, the cursor will return to the first line of missing information to prompt your entry. You can always move around the screen to edit an entry that you have already made by using your mouse or tab key.

2. Format of the Data Entries

MUNIPAY is very flexible regarding the format of data entries that it will accept, unlike non-Windows™ models that require specific entry formats (i.e., you cannot enter numerical values with any commas, dollar signs, or percent signs). For example, the financial data screen requires the user to enter the designated fund balance from the municipality's data request form. Suppose that this figure is $45,600. The user can enter that figure as "45600" "45600.00", "45,600", or "45,600.00." The model will record that figure as $45,600. (MUNIPAY automatically enters the dollar sign for you once you enter the number and move on to the next entry.) The same is true for all other inputs.

Be careful to use only the number keys to enter numerical values. A common mistake is typing the lowercase letter **L** instead of a number 1. Another error occurs if you type the capital letter **O** instead of the number 0 (zero). The model cannot adjust for figures that you may enter with a mix of both number and letter keys.

3. Help System

As noted previously, the user can easily access the help system by either pressing the F1 key or clicking on the "Help" button, which most input and output screens provide. The help feature allows the user to obtain help in both running the model and understanding the model's output.

4. Correcting Typing Errors

After typing your entry, you might discover that you have typed an incorrect letter or number. If you have not yet clicked on the "Continue" button at the base of the window, simply click on the entry containing the error and correct it. For example, if you typed 100,234 and then want to delete one of the zeros, you would simply click on the input box and correct the figure (i.e., 10,234). If you discover the error after you have clicked on "Continue" or at some later time, you can select the same case again, and then click on the appropriate Enter/Edit button to return to the screen where you can correct the entry.

Like all computer programs, MUNIPAY follows the GIGO protocol: "Garbage In, Garbage Out." Verifying your data inputs is therefore extremely important, both by examining them on the screen as well as comparing the data printout with the municipality's completed data request form.

Most people find that they can perform a better audit by checking the data printout than they can by checking the input window on the computer screen.

5. Error Messages

The model will notify you quickly if you have made an error that will prevent the model from conducting a demographic or affordability analysis. These types of errors generally include the lack of input information integral to the model's calculations. In such cases, the model will prompt you to return to the missing or inaccurately entered data before continuing on the ability-to-pay analysis. In Exhibit 2-7 below, the user has neglected to enter a value in the financial data section. Error messages like this will appear when data necessary for the operation of the model are missing.

Exhibit 2-7

ERROR MESSAGE FOR MISSING DATA

6. Ending Procedures

MUNIPAY automatically saves all inputs and runs when you complete each screen, and prompts you if you want to save them again after you have made changes to them. Exhibits 2-8 and 2-9 on the following page provide examples of these prompts.

Exhibit 2-8

PROMPT FOR SAVING CHANGES TO A CASE

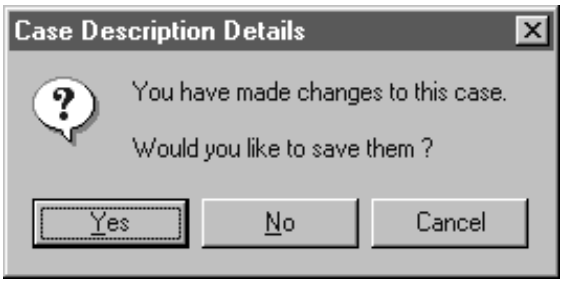
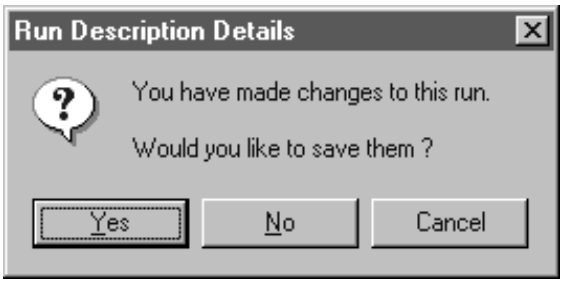


Exhibit 2-9

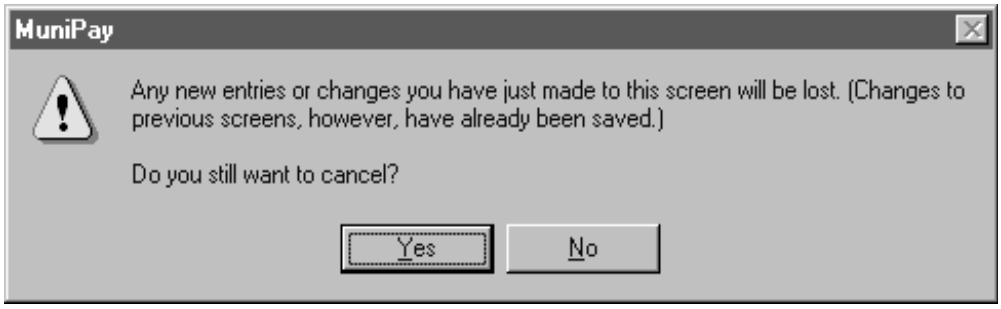
PROMPT FOR SAVING CHANGES TO A RUN



Furthermore, if you click on the "Cancel" button, MUNIPAY will ask if you really want to lose your changes. Exhibit 2-10 below provides an example of this prompt.

Exhibit 2-10

PROMPT FOR CANCELING CHANGES



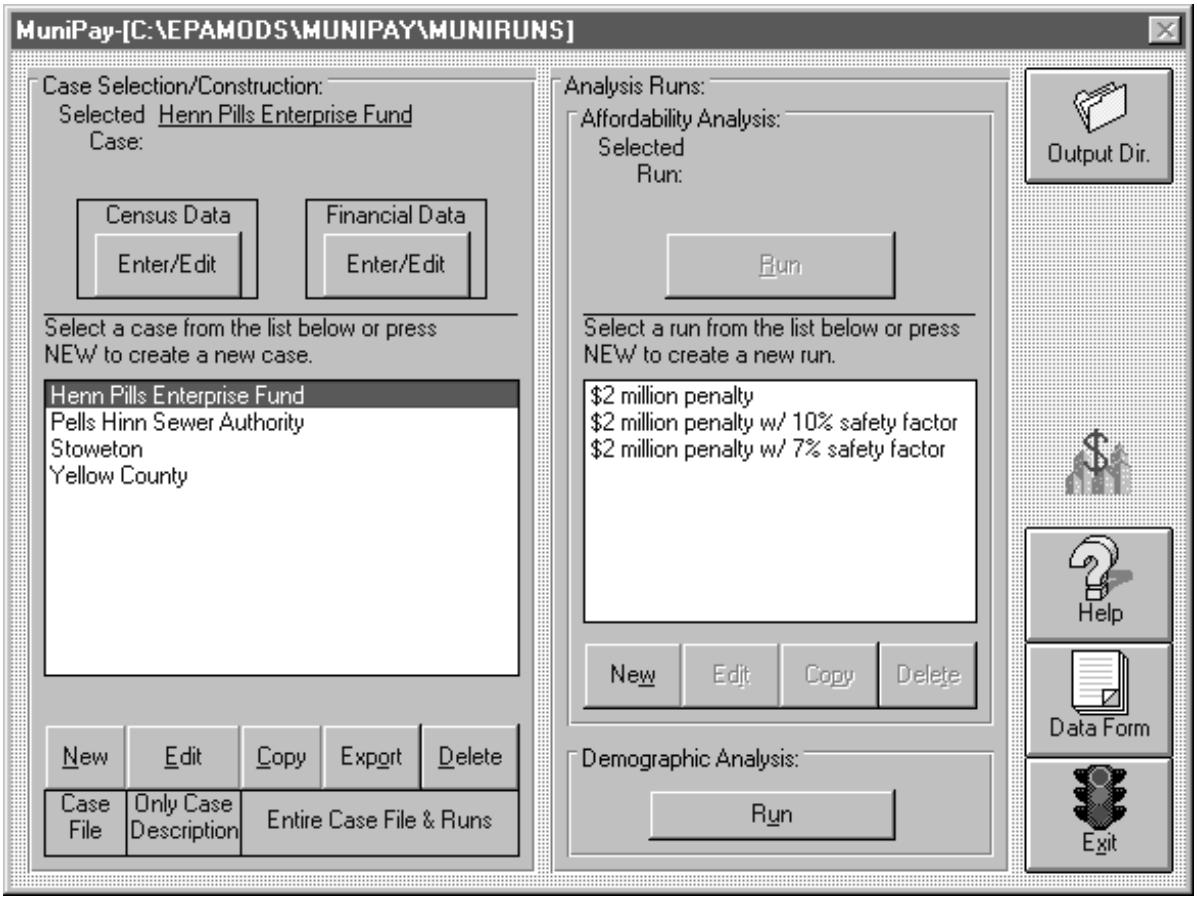
Finally, once you are sure you are finished with your MUNIPAY session, simply click on the "Exit" button at the bottom right of the main screen to end the program.

7. Printing Options

MUNIPAY allows you to print both your data inputs and analysis runs. Simply click on the "Print" button at the bottom of the associated screen. You can print at any time during your MUNIPAY session.

This chapter explains how to select and construct cases in the MUNIPAY model. The left-hand side of MUNIPAY's main screen presents various buttons for selecting and constructing cases. Exhibit 3-1 on the following page provides an example of the main screen. The following sections provide an explanation of MUNIPAY's case management options, a description of the required case description details, and help on entering and editing data.

Exhibit 3-1
MAIN SCREEN



A. CASE MANAGEMENT OPTIONS

Five buttons to help you manage your cases are at the bottom of the left-hand side of the main screen. The following sections explain when and how to use these buttons.

1. New

If you want to create a new case, simply click on the "New" button. MUNIPAY will then put you into the screen for entering the case description details (see "Case Description Details" section below).

2. Edit

If you want to edit an existing case's description only, use your mouse to highlight the case title and then click on the "Edit" button. MUNIPAY will put you into the screen for editing the case description details (see "Case Description Details" section below). Note that if you want to edit an existing case's data and not just its description, you must use the appropriate "Enter/Edit" button (see sections C and D for entering and editing data).

3. Copy

If you want to copy an entire case file, including both its description and all of its data, use your mouse to highlight the case title and then click on the "Copy" button. You would typically copy an entire case file if you needed to rerun the case with several revised inputs, but still wanted to keep the original file for future reference.

4. Export

If you want to export an entire case file, including both its description and all of its data, use your mouse to highlight the case title and then click on the "Export" button. This allows you to provide a copy of one of your cases to another user, but without having to give that user the contents of your entire MUNIPAY working directory.

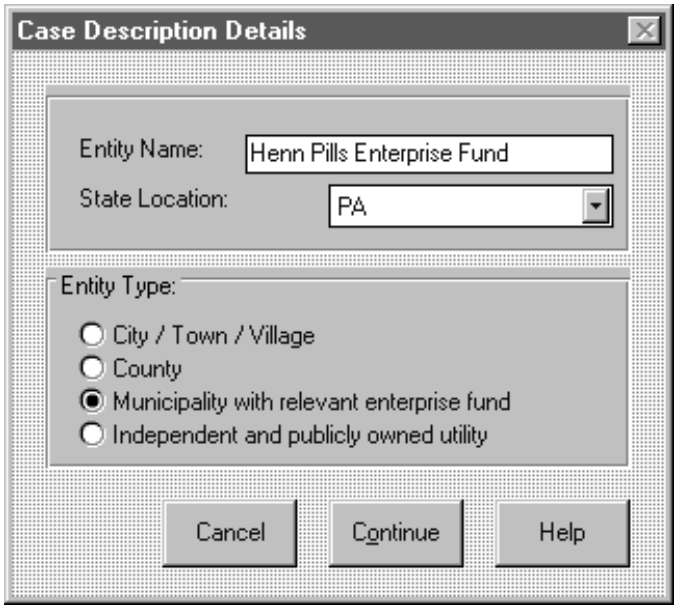
5. Delete

If you want to delete an entire case file, including both its description and all of its data, then use your mouse to highlight the case title and then click on the "Delete" button.

B. CASE DESCRIPTION DETAILS

Exhibit 3-2 provides an example of the screen for entering or editing the case description details. You must enter the entity name, state location, and entity type.

Exhibit 3-2
CASE DESCRIPTION DETAILS SCREEN



1. Entity Name

Enter the name of the municipality. This name will also serve as the case title.

2. State Location

Enter the state location of the municipality in the form of the appropriate two-letter abbreviation. Note that you must use the mouse and scroll bar to select the abbreviation instead of typing in the full name or both letters. You can, however, enter the first letter of the state to jump to the appropriate alphabetic region.

3. Entity Type

MUNIPAY divides municipalities into four different types of entities. Selecting the appropriate entity type is the most important single decision you must make in using the MUNIPAY Model. The following sections provide explanations of each type.

a. City / Town / Village

Select this entity type for a locality (city, town, village, etc.) whose environmental expenditures relate to its general operations. Typically these are operations that receive their funding through general taxation revenues (e.g., property taxes), rather than from specific funding sources (e.g., user fees). An example is a city whose tree trimming operations resulted in a RCRA civil penalty.

b. County

Select this entity type for a county whose environmental expenditures relate to its general operations. Typically these are operations that receive their funding through general tax revenue (e.g., property taxes), rather from specific funding sources (e.g., user fees). MUNIPAY will use the same data and perform the same analysis as it would for a city, town, or village, but the default values will differ slightly.

c. Municipality with Enterprise Fund

Select this entity type for a municipality (city, town, village, or county) whose environmental expenditures are a general municipal responsibility and also the responsibility of an enterprise fund. An enterprise fund separately accounts for a service that a municipality provides (e.g., drinking

water, sewage treatment, or electricity). Its finances and operations are similar to those of a private business. An example is a city that must build a new wastewater treatment plant, which will receive financing through user fees from a Sewer Fund.

Clean Water Act cases almost always involve an enterprise fund. For other types of cases, you might want to ask the municipality for a list of its enterprise funds and whether any of them are relevant to the current enforcement action.

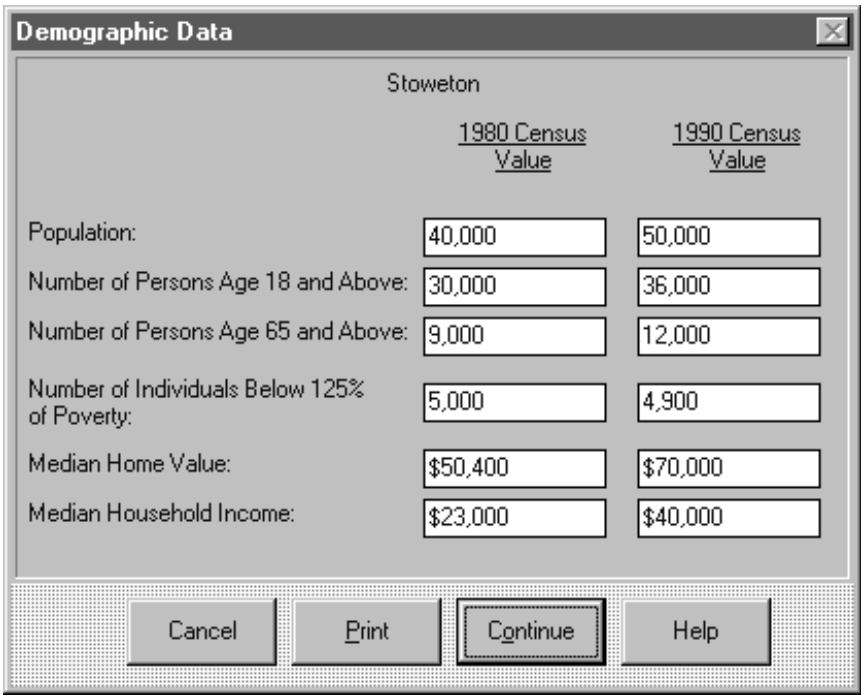
d. Independent and Publicly Owned Utility

Select this entity type for a publicly owned entity that is legally and financially separate from any municipality but serves several underlying communities, and accounts for its operations in an enterprise-fund manner. An example is an electric power utility that serves several small towns. The data entry and affordability analysis for this entity type is almost the same as that for a municipality with an enterprise fund.

C. ENTERING AND EDITING U.S. CENSUS DEMOGRAPHIC DATA

To enter or edit U.S. Census demographic data for a case, first use your mouse to highlight the case title. Then click on the "Enter/Edit" button for Census Data at the top left of the screen. Exhibit 3-3 on the following page provides an example of the screen for entering and editing U.S. Census data. The municipality should already have completed the corresponding section of the data request form, which also provides advice on exactly where to locate each requested item from a U.S. Census data source. (You can the click on the "Data Form" button at the right of MUNIPAY's main screen to print a copy of the data request form.) If the municipality for some reason has not completed this form, then you can obtain the required U.S. Census data from publicly available sources as noted on the data request form in Appendix C. When you have finished entering the data, simply click on the "Continue" button.

Exhibit 3-3
U.S. CENSUS DATA ENTRY AND EDIT SCREEN



D. ENTERING AND EDITING FINANCIAL DATA

To enter or edit financial data for a case, first use your mouse to highlight the case title. Then click on the "Enter/Edit" button for Financial Data at the top right of the left-hand side of the screen. On the following pages, Exhibit 3-4 provides an example of this screen for a city, town, village or county, Exhibit 3-5 provides an example for a municipality with a relevant enterprise fund, and Exhibit 3-6 is for an independent and publicly owned utility.

The municipality should already have completed the corresponding section of the data request form, which also includes detailed explanations of the information sought for each entry. Unlike the demographic data, MUNIPAY collects different types of financial data depending on the municipality's type, so be sure you have the appropriate form. (You can click on the "Data Form" button at the right of MUNIPAY's main screen to print a copy of the data request form.)

If the municipality on its completed form claims it does not have a recent debt rating, click on S&P's BBB or Moody's Baa rating (their lowest investment-grade ratings). Also, if the municipality reports that its state government does not impose a limit upon general obligation debt, then remember to "uncheck" the state limit box.

Exhibit 3-4
FINANCIAL DATA ENTRY AND EDIT SCREEN FOR CITY, TOWN, VILLAGE, OR COUNTY

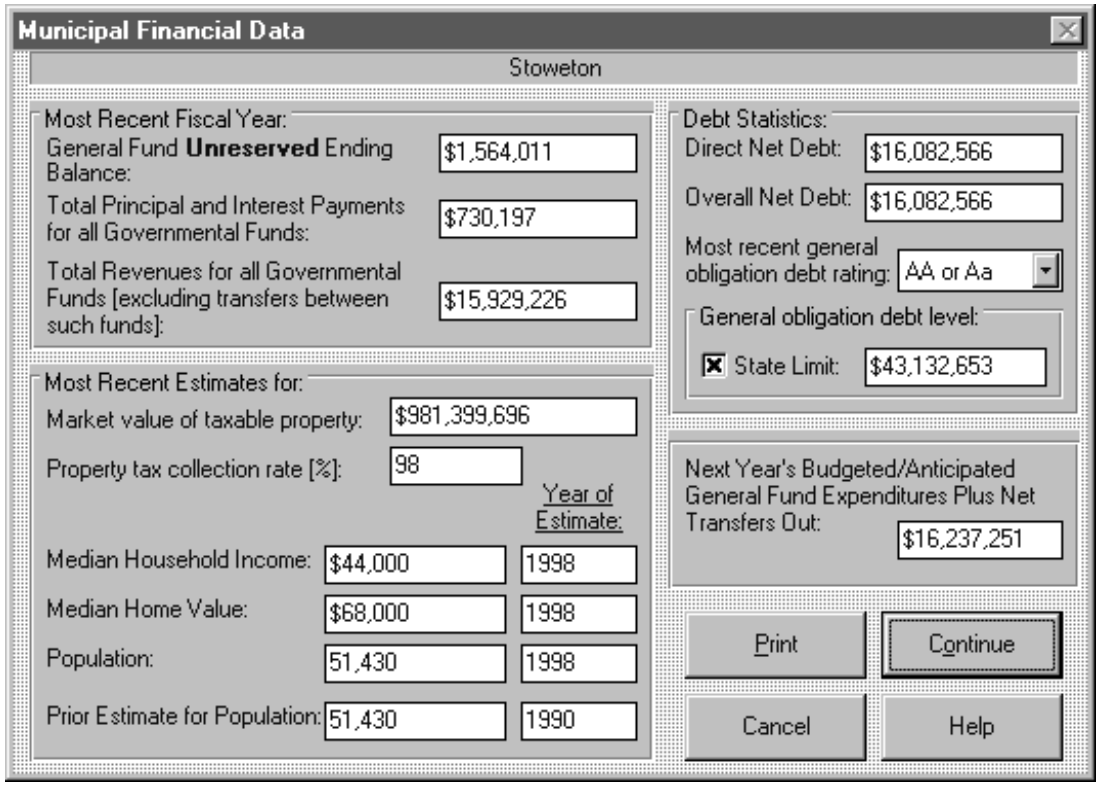


Exhibit 3-5
FINANCIAL DATA ENTRY AND EDIT SCREEN FOR MUNICIPALITY WITH RELEVANT ENTERPRISE FUND

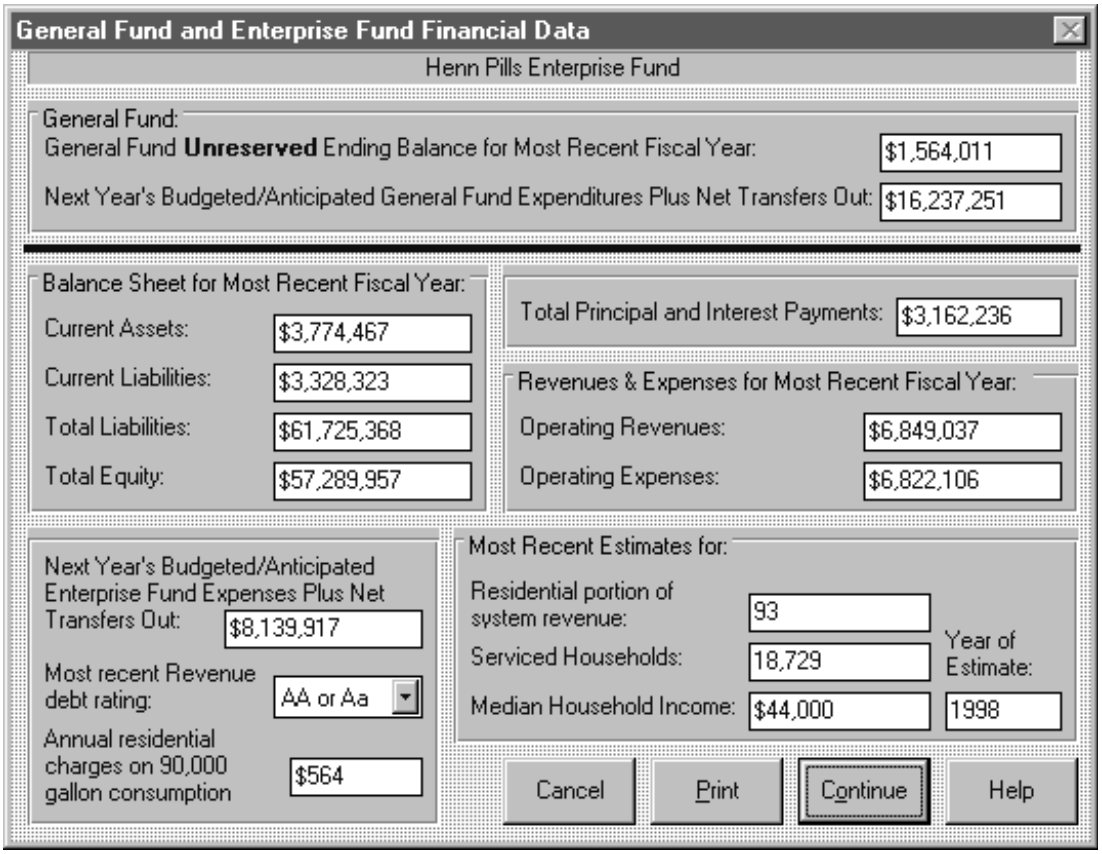
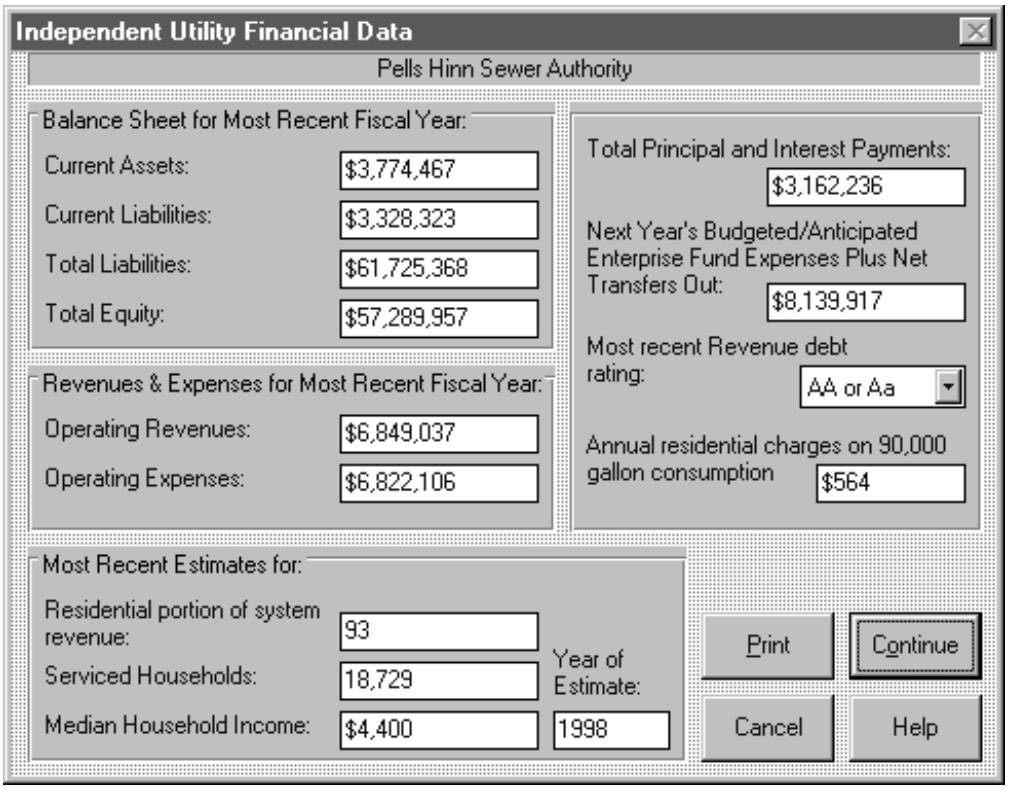


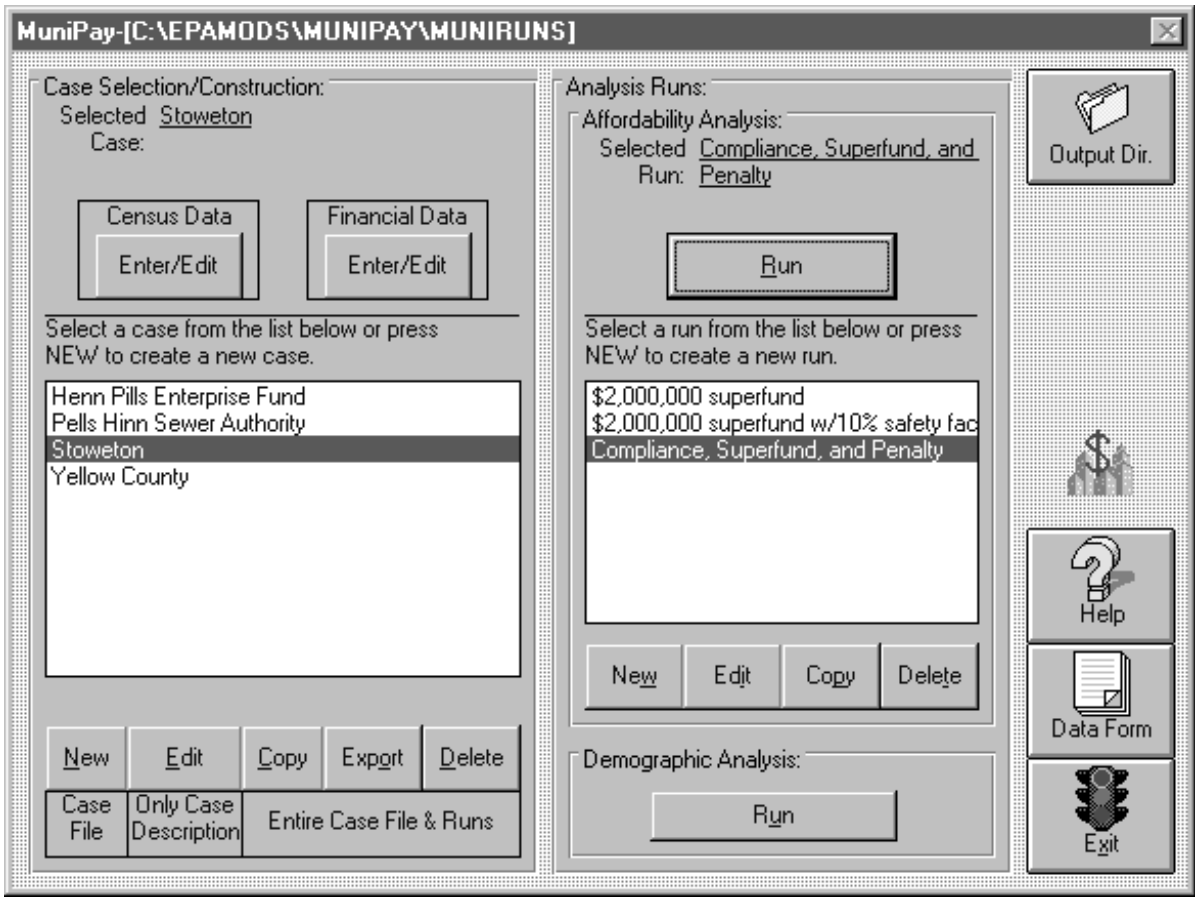
Exhibit 3-6
FINANCIAL DATA ENTRY AND EDIT SCREEN FOR INDEPENDENT AND PUBLICLY OWNED UTILITY



RUNNING DEMOGRAPHIC AND AFFORDABILITY ANALYSES CHAPTER 4

This chapter explains how to run demographic and affordability analyses in the MUNIPAY model. The right-hand side of MUNIPAY's main screen presents various buttons for conducting either a demographic analysis or an affordability analysis. Exhibit 4-1, on the following page, provides an example of the main screen. The two analyses operate completely independently of each other. The following sections describe how to conduct each analysis and interpret its results.

Exhibit 4-1
MAIN SCREEN

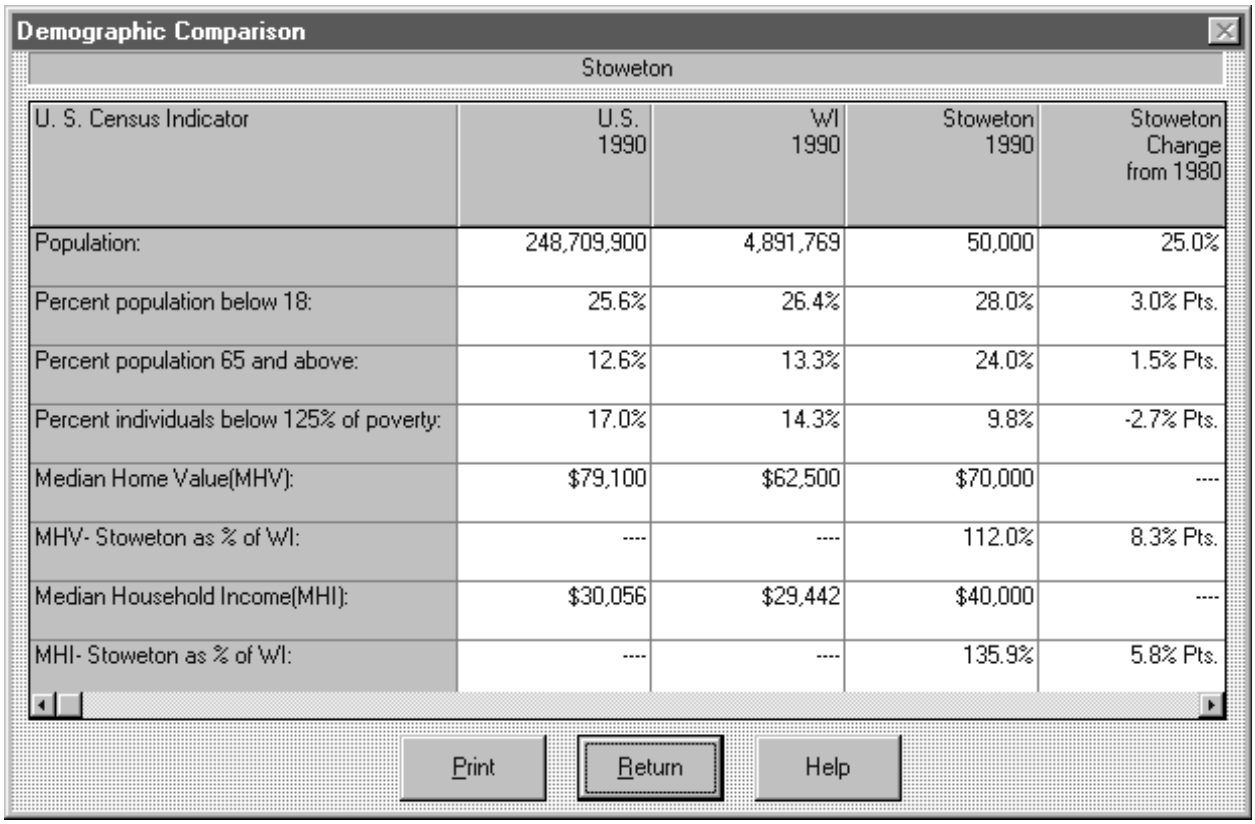


A. DEMOGRAPHIC ANALYSIS

To run a demographic analysis you simply click on the "Run" button at the bottom of the main screen, in the box titled "Demographic Analysis." MUNIPAY will then display a table for the results. Exhibit 4-2 below provides an example.[1] To print your results simply click on the "Print" button. The following sections explain the significance of each result.

[1] The final column displaying the municipality's change from 1980 generally expresses the results in terms of percentage points ("% Pts."). Therefore, a change in a value from 10 percent in 1980 to 12 percent in 1990 is a change of two percentage points ("2.0% Pts."), rather than 20 percent (i.e., (12/10 - 1) * 100).

Exhibit 4-2
DEMOGRAPHIC ANALYSIS



Demographic Comparison

Stoweton

U. S. Census Indicator	U.S. 1990	WI 1990	Stoweton 1990	Stoweton Change from 1980
Population:	248,709,900	4,891,769	50,000	25.0%
Percent population below 18:	25.6%	26.4%	28.0%	3.0% Pts.
Percent population 65 and above:	12.6%	13.3%	24.0%	1.5% Pts.
Percent individuals below 125% of poverty:	17.0%	14.3%	9.8%	-2.7% Pts.
Median Home Value(MHV):	$79,100	$62,500	$70,000	----
MHV- Stoweton as % of WI:	----	----	112.0%	8.3% Pts.
Median Household Income(MHI):	$30,056	$29,442	$40,000	----
MHI- Stoweton as % of WI:	----	----	135.9%	5.8% Pts.

Print Return Help

Unlike the Affordability Analysis, the Demographic Analysis does not produce a single point estimate or assessment for the community's economic health. Instead, it generates comparisons with state and national norms for selected U.S. Census indicators. The Demographic Analysis thereby provides more general, background information on the community than the Affordability Analysis's eventual point estimate. The Demographic Analysis can also aid the advanced user (i.e., an analyst familiar with financial economics, especially pertaining to municipalities) in modifying the default parameters for the Affordability Analysis. For example, a 25-percent debt service ratio might be sustainable for a community with a solid resource base, but overly burdensome for a community whose economic health appears to be deteriorating sharply. Remember, however, that the required inputs to the Affordability Analysis include demographic data (e.g., income, population, home value), so the affordability results will always reflect certain aspects of the municipality's demographics.

1. Population

All else being equal, the higher the population the higher the ability to afford a certain level of environmental expenditures. A positive percentage change in population since 1980 is a sign of a growing and probably vibrant community. A negative change, however, is a possible sign of a community in decline, often with accompanying symptoms of economic distress.

2. Population Below 18

A high percentage of the population below 18 years old relative to national and state averages indicates a greater financial burden to households from non-wage earning dependents, and a greater financial burden to municipalities and school districts from provision of services. It can also indicate, however, a younger and therefore growing community. A positive change in this percentage since 1980 is a possible sign of an influx of young families, probably indicating a growing community.

3. Population 65 and Above

A high percentage of the population 65 and above relative to national and state averages possibly indicates a constrained resource base, with many residents on a fixed income. On the other hand, according to some measures, the elderly now constitute society's most economically well-off group. Therefore, depending on the interpretation and the larger context, a growing percentage of the elderly population could indicate either an outflux of younger members from a declining community, or wealthy retirees moving to a desirable community.

4. Percent of Individuals Below 125% of Poverty

A high percentage of individuals below 125% of the poverty level relative to national and state averages indicates a constrained resource base and a greater burden upon municipal services.[2] A percentage of impoverished individuals that has increased significantly between 1980 and 1990 is a strong indication of economic distress.

5. Median Home Value

A high median home value relative to national and state averages can indicate a relatively prosperous community with a strong property tax base. A community could nevertheless be relatively prosperous and have a low median home value, simply because a more rural landscape keeps land prices low. Thus, you may want to compare home values for the municipality with those in adjacent communities to gain a better understanding of your results.[3] A median home value that has increased significantly between 1980 and 1990 relative to the state average is a strong indication of a growing community.

6. Median Household Income

High median household income relative to national and state averages are an indication of a relatively prosperous community. A community could nevertheless be relatively prosperous despite low income measures if its cost of living is correspondingly low. Thus, you may want to compare income measures for the municipality with those in adjacent communities to gain a better

---

[2] MUNIPAY uses individuals below 125% of the poverty level, instead of simply individuals below poverty (i.e., below 100% of the poverty level), to provide a broader measure of the population living in poor economic circumstances.

[3] You can look up U.S. Census data for neighboring communities, or, in some states, government agencies may be able to provide you with more recent data. Availability, however, varies widely by state.

understanding of your results.[4] Income measures that have increased significantly between 1980 and 1990 relative to the state average are a strong indication of an improving local economy.

B. AFFORDABILITY ANALYSIS

The affordability analysis is more complex than the demographic analysis, and therefore requires more input from the user. The first step is to use the run management buttons in the main screen (see Exhibit 4-1) to create, edit, or copy a run. (You also have the option of deleting a run you no longer need.) Once you have created a run, simply highlight the run title using your mouse, and then click "Run" at the top of the "Affordability Analysis" box.

The following sections explain how to create a run, and then provide help on viewing and interpreting your results.

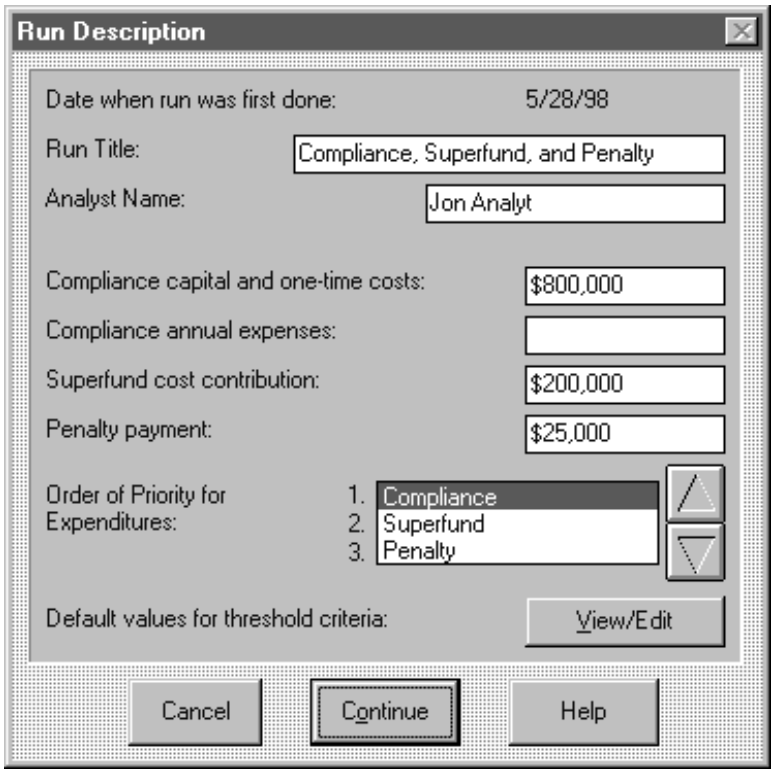
1. Run Creation

a. Run Description

After you select "Run" in the "Affordability Analysis" box, the "Run Description" screen will appear. Here, you provide certain data inputs describing the level and type of environmental expenditures, and you also have the option of viewing and editing the default values for the affordability analysis's threshold criteria. Exhibit 4-3 provides an example of the run description screen. The following sections describe each data item in more detail. If an item is inapplicable to your case, simply enter zero.

[4] As with home value data, you can look up U.S. Census data for neighboring communities, or, in some states, government agencies may be able to provide you with more recent data. Availability, however, varies widely by state.

Exhibit 4-3
RUN DESCRIPTION



Run Title

Enter a title for your run. Any format is acceptable. After you have finished creating the run, this title will appear in the run selection box of the main screen.

Analyst Name

Enter your own name. Any format is acceptable.

Compliance Capital and One-Time Costs

Enter the sum of all capital investments and one-time costs necessary for compliance (e.g., design and construction costs for a wastewater treatment plant). MUNIPAY will assume that this figure is in current dollars.

Compliance Annual Expenses

Enter the average yearly total of all annually recurring expenses necessary for compliance (e.g., annual operation and maintenance costs for a wastewater treatment plant). Do not include interest, other financing expense, or annualized capital recovery expense. MUNIPAY will assume that this figure is in current dollars.

Superfund Cost Contribution

Enter the Superfund cleanup cost contribution that you propose to seek from the municipality.[5] MUNIPAY will assume that this figure is in current dollars.

Penalty Payment

Enter the penalty payment that you propose to seek from the municipality. MUNIPAY will assume that this figure is in current dollars.

Order of Priority for Expenditures

If you are seeking more than one type of environmental expenditure, then you may wish to alter the order of prior for expenditures. MUNIPAY's default is to assume that compliance costs have the highest priority, followed by Superfund cost contributions, followed by penalty payment. To alter this default hierarchy, click on each type of expenditure in turn, and then click on the up or down arrow.

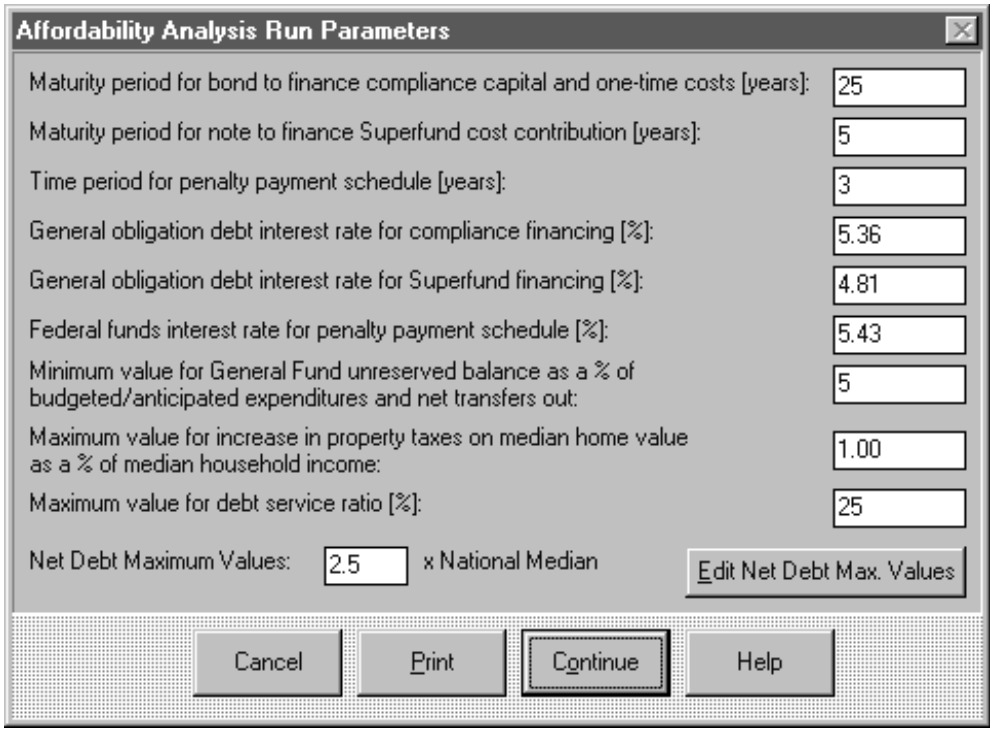
Default Values for Run Parameters

The affordability analysis requires certain parameters and threshold criteria, for which it provides default values. Pressing the View/Edit will allow you to view these parameters and criteria, and edit them if you want to provide your own customized values. Exhibit 4-4 and 4-5 provide examples of the run parameters for a city, town, village or county, and for a municipality with an enterprise fund or an independent and publicly owned utility. Generally, you should not modify the default values unless you have a sound reason, or you have consulted a financial analyst. The following sections describe in detail the different sets of run parameters.

---

[5] Cleanup costs under other remediation statutes (e.g., Oil Pollution Act, Underground Storage Tanks, RCRA Corrective Action) should generally be entered under the Compliance Costs category. This is a somewhat moot issue though, since the user can always modify each expenditure category's priority and run parameters.

Exhibit 4-4
RUN PARAMETERS FOR CITY, TOWN, VILLAGE, OR COUNTY



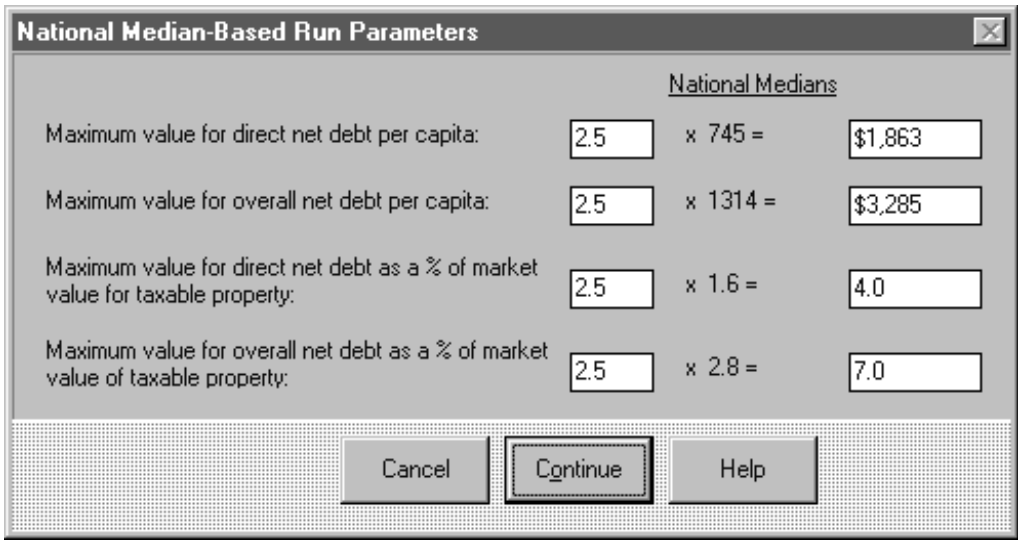
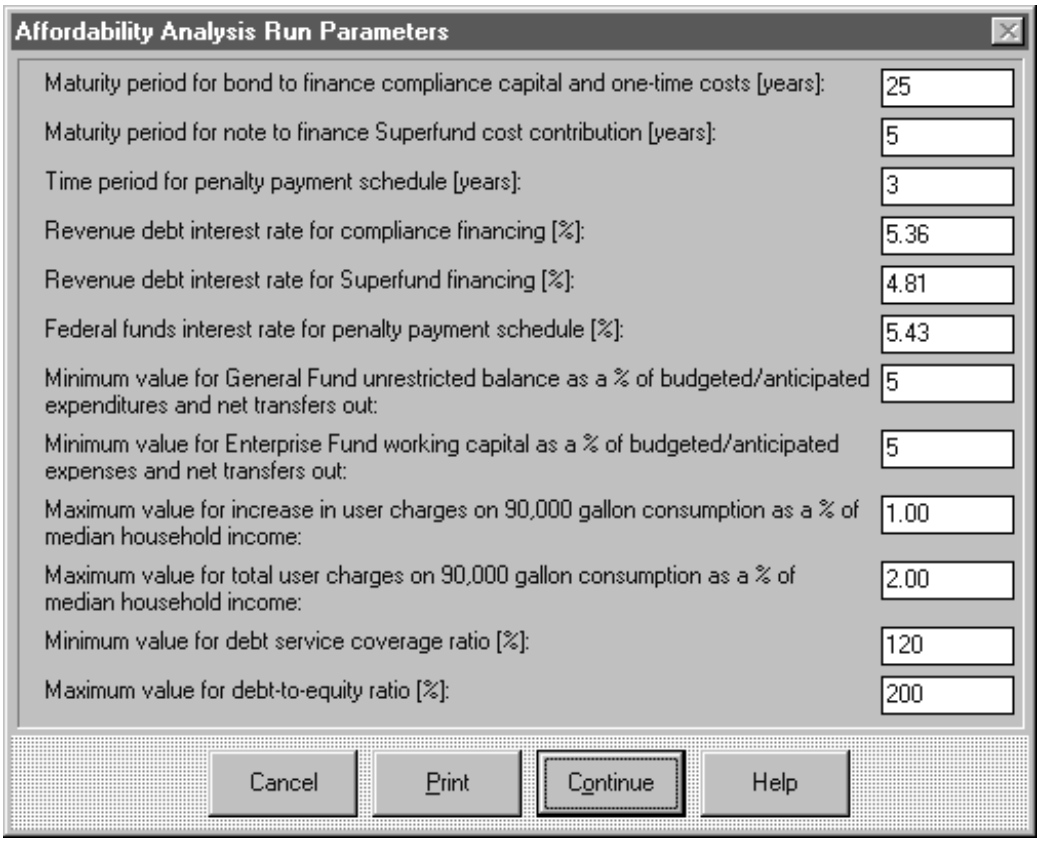


Exhibit 4-5
RUN PARAMETERS FOR MUNICIPALITY WITH ENTERPRISE FUND



b. Run Parameters for City, Town, Village, or County

Maturity Period for Bond to Finance Compliance Capital and One-Time Costs

This entry defines the maturity period of the bond used to finance capital and one-time costs for compliance. The default value is 25 years.

Generally, the maturity period of a bond should not exceed the life of the funded project. A longer maturity period will lower the annual debt repayment burden but also increase the total interest payments, with the net effect possibly increasing the affordability.[6] A longer maturity period

[6] The net effect of changes in this and other parameters only "possibly" increases the affordability because this particular threshold criteria may not be a binding constraint upon the municipality's ability to issue additional debt. Most of the MUNIPAY run parameters function independently of each other, and the (continued...)

will also extend the annual repayment burden (even though it is lower) over a longer period of time, an important economic burden that is not a direct factor in the affordability calculations.[7]

The default value reflects the upper end of the useful life of a typical pollution control investment. The maximum value that the model will accept for the maturity period is 30 years.

Maturity Period for Bond to Finance Superfund Cost Contribution

This entry defines the maturity period of the bond (or note) used to finance the Superfund cleanup cost contribution. The default value is five years.

Generally the maturity period of a bond should not exceed the life of the funded project. A longer maturity period will lower the annual debt repayment burden but also increase the total interest payments, with the net effect possibly of increasing the affordability. A longer maturity period will also extend the annual repayment burden (even though it is lower) over a longer period of time, an important economic burden that is not a direct factor in the affordability calculations.[8]

The default value of five years, however, limits the annual debt repayment burden to a fairly short period of time, much shorter than the life of the typical remediation project. The intent is to create a less burdensome standard for Superfund affordability relative to compliance cost affordability. The maximum value that the model will accept for the maturity period is 30 years.

Time Period for Penalty Payment Schedule

This entry defines the length of the payment schedule for the penalty. The default value is three years.

---

[6] (...continued)
constraint that is binding will depend on the particular set of financial data inputs. For example, selecting a maturity period of 25 years may allow a $1 million bond, whereas a 30-year maturity period may allow a $1.1 million bond. At the same time, however, one of the net debt ratio parameters may limit the bond to only $900,000, so the selection of the maturity period ultimately has no effect upon the affordability result.

[7] This is a burden because it extends the period over which the municipality is able to assume less debt for other expenditures. For example, a 25-year maturity period means that the municipality will be using a portion of its taxing and debt repayment capacity for the environmental expenditures at issue, making that portion unavailable for other purposes over a period of 25 years. A 30-year maturity period would further decrease the availability of taxing and debt repayment capacity by an additional five years.

[8] This is a burden because it extends the period over which the municipality is able to assume less debt for other expenditures. See footnote 7 for more details.

A longer time period will lower the annual payment burden but also increase the total interest payments, with the net effect possibly of increasing the affordability. A longer time period will also extend the annual payment burden (even though it is lower) over a longer period of time, an important economic burden that is not a direct factor in the affordability calculations.[9]

The default value of three years reflects the length of a typical penalty payment schedule. The maximum value that the model will accept is five years.

General Obligation Debt Interest Rate for Compliance Financing

MUNIPAY automatically derives the interest rate on general obligation debt for the financing of compliance costs from one of its internal lookup tables. The lookup table contains default value interest rates as a function of the maturity period and debt rating. If you have specific information about the municipality's interest rates for recent debt issues, you can enter a custom value. Alternatively, since the data in the lookup table is updated only annually, you may wish to obtain the current interest rates for different combinations of maturity period and debt rating from the Rating Desk at Moody's Investor Services (212/553-0315), from the current issue of the *Federal Reserve Bulletin*, Table 1.35 (Interest Rates), lines 30-32, or from the Federal Reserve web site (http://www.bog.frb.fed.us).[10] Also, in the business section of most newspapers you can find a composite interest rate for municipal bonds, representing an average of various maturity periods and ratings.

General Obligation Debt Interest Rate for Superfund Financing

MUNIPAY automatically derives the interest rate on general obligation debt for the financing of the Superfund cleanup cost contribution from one of its internal lookup tables. The lookup table contains default value interest rates as a function of the maturity period and debt rating. If you have specific and current information about the municipality's interest rates for recent debt issues, you can enter a custom value. Alternatively, since the data in the lookup table is updated only annually, you may wish to obtain the current interest rates for different combinations of maturity period and debt rating from the Rating Desk at Moody's Investor Services (212/553-0315), from the current issue of the *Federal Reserve Bulletin*, Table 1.35 (Interest Rates), lines 30-32, or from the Federal

---

[9] This is a burden because it extends the period over which the municipality is able to assume less debt for other expenditures. See footnote 7 for more details.

[10] Moody's tracks interest rates for 20-year municipal bonds with Aaa, Aa, A, and Baa ratings, and 10-year municipal bonds with Aaa and Aa ratings. (You will have to perform a reasonable extrapolation for 10-year bonds with A and Baa ratings.) Table 1.35 of the *Federal Reserve Bulletin* tracks interest rates for 20-year municipal bonds with ratings of Aaa on line 30, Baa on line 31, and A on line 32.

Reserve web site (http://www.bog.frb. fed.us).[11] Also, in the business section of most newspapers you can find a composite interest rate for municipal bonds, representing an average of various maturity periods and ratings.

Federal Funds Interest Rate for Penalty Payment Schedule

The default value for the interest rate of the penalty payment schedule is the Federal Funds rate. Since this value is updated only annually, you may wish to obtain the most up-to-date value from the business section of most newspapers.

Minimum Value for General Fund Unreserved Balance as a % of Budgeted/Anticipated Expenditures and Net Transfers Out

The default value is five percent for the minimum value of the General Fund unreserved balance as a percentage of budgeted/anticipated expenditures and net transfers out. Any portion of the unreserved fund balance above this amount is considered currently available for environmental expenditures. The default value is based upon recommendations from the public finance and management literature.[12] The higher the value, the lower the ability to pay might be. The model will not accept a value below the default of five percent.

You should increase this value only if you believe the municipality's revenues and/or expenditures are subject to significantly higher than average variability (e.g., a significant portion of revenues from a tax with an unstable base, frequent weather emergencies that lead to unexpected expenditures, etc.). Such variability could justify the maintenance of a fund balance exceeding five percent to cover revenue shortfalls or emergency expenditures. You would therefore enter a value above five percent to reflect the municipality's particular situation.

Maximum Value for Property Tax Increase as a % of Median Household Income

---

[11] See footnote 10 for more details.

[12] Moody's Investors Services, *Moody's on Municipals: An Introduction to Issuing Debt* (1991), p. 27; Freda S. Johnson, "Credit Fundamentals — The Rating Agency Perspective," *The Handbook of Municipal Bonds and Public Finance*, eds. Robert Lamb, James Leigland, and Stephen Rappaport (1993), p. 124; Claire Gorham Cohen, "Analyzing Government Credit," *The Handbook of Municipal Bonds and Public Finance*, eds. Robert Lamb, James Leigland, and Stephen Rappaport (1993), p. 134; Lon Sprecher, "Operating Budgets," *Local Government Finance: Concepts and Practices*, eds. John E. Petersen and Dennis R. Strachota (1991), p. 62; Robert N. Anthony and David W. Young, *Management Control in Nonprofit Organizations* (1988), p. 540.

The default value is 1.0 percent for the maximum value of a property tax increase on the median home value as a percentage of median household income. MUNIPAY calculates the additional annual user property taxes that the median homeowner will need to pay for the municipality to finance the environmental expenditures, and checks that these annual property taxes do not exceed the specified percentage of median household income. The higher the threshold value, the higher the ability to pay might be. The intent of the default value is to correspond very roughly with the recommended maximum user fee burdens for households under various EPA policy guidelines.[13] The model will accept any value.

Maximum Value for Debt Service Ratio

The default value is 25 percent for the debt service ratio, which divides the total debt service payments (principal and interest) of all governmental funds by their total revenues. The calculations for future financing of environmental expenditures limit additional debt issuance such that its repayment would not result in a higher than specified debt service ratio. The higher the value, the higher the ability to pay might be.

The default value slightly exceeds the "warning marks" found in the public finance and management literature.[14] A municipality can maintain a higher level of debt service, but a higher level may reduce the confidence of creditors that the municipality can repay its debt on time. This reduction in confidence could make it more difficult for the municipality to borrow funds in the future.

---

[13] For a summary of these, see *Evaluating Municipal Environmental Burdens*, prepared for the U.S. EPA Office of Policy, Planning, and Evaluation, by The Cadmus Group, Inc., September 30, 1994. See also U.S. EPA Office of Water, *Combined Sewer Overflows — Guidance for Financial Capability Assessment and Schedule Development*, March 1997; and U.S. EPA Region V Water Division, *Interim Procedures for Conducting Municipal Financial Capability Analysis in Support of Water Enforcement Actions*, June 1997.

[14] George G. Kaufmann and Philip J. Fischer, "Debt Management," in *Management Policies in Local Government Finance*, eds. J. Richard Aronson and Eli Schwartz, p. 300; Sanford M. Groves and Maureen Godsey Valente, *Evaluating Financial Condition: A Handbook for Local Government*, p. 88; Standard and Poor's Corporation, *S&P's Municipal Finance Criteria* (1999), p. 19.

Net Debt Ratios

Maximum Value for Direct Net Debt per Capita
Maximum Value for Overall Net Debt per Capita
Maximum Value for Direct Net Debt as a % of Market Value for Taxable Property
Maximum Value for Overall Net Debt as a % of Market Value for Taxable Property

The four net debt ratios are indicators of the relative level of the municipality's current debt burden. The default values are equal to 2.5 times the medians for a population-specific national sample. If you want to change these values, you can specify either a new multiplier (i.e., the 2.5 default value) or a new end value (i.e., the product of the multiplier and the national median). You can change the multiplier simultaneously for all four ratios, or you can click on the button to the right and modify each ratio's value independently.

The calculations for future financing of environmental expenditures limit additional debt issuance such that it does not result in ratios higher than the specified values. The higher the value, the higher the ability to pay might be. The public finance and management literature generally recommends that the ratio for overall net debt as a percentage of market value for taxable property not exceed 10 to 12 percent.[15] Recommendations for the other three net debt ratios are not as universal, but in general having the same multipliers of the national medians for all four ratios is appropriate.

c. Run Parameters for Enterprise Fund or Independent and Publicly Owned Utility

Maturity Period for Bond to Finance Compliance Capital and One-Time Costs

This entry defines the maturity period of the bond used to finance capital and one-time costs for compliance. The default value is 25 years.

Generally, the maturity period of a bond should not exceed the life of the funded project. A longer maturity period will lower the annual debt repayment burden but also increase the total interest payments, with the net effect possibly increasing the affordability.[16] A longer maturity

---

[15] George G. Kaufmann and Philip J. Fischer, "Debt Management," in *Management Policies in Local Government Finance*, eds. J. Richard Aronson and Eli Schwartz, p. 300; Sanford M. Groves and Maureen Godsey Valente, *Evaluating Financial Condition: A Handbook for Local Government*, p. 85; Robert Berne and Richard Schramm, *The Financial Analysis of Government*, p. 260; Moody's Investor Services, *Pitfalls in Issuing Municipal Securities*, p. 19.

[16] The net effect may only "possibly" increase the affordability because this particular threshold criteria may not be a binding constraint upon the municipality's ability to issue additional debt. See footnote 6 for (continued...)

period will also extend the annual repayment burden (even though it is lower) over a longer period of time, an important economic burden that is not a direct factor in the affordability calculations.[17]

The default value reflects the upper end of the useful life of a typical pollution control investment. The maximum value that the model will accept for the maturity period is 30 years.

Maturity Period for Bond to Finance Superfund Cost Contribution

This entry defines the maturity period of the bond (or note) used to finance the Superfund cleanup cost contribution. The default value is five years.

Generally the maturity period of a bond should not exceed the life of the funded project. A longer maturity period will lower the annual debt repayment burden but also increase the total interest payments, with the net effect possibly of increasing the affordability. A longer maturity period will also extend the annual repayment burden (even though it is lower) over a longer period of time, an important economic burden that is not a direct factor in the affordability calculations.[18]

The default value of five years, however, limits the annual debt repayment burden to a fairly short period of time, much shorter than the life of the typical remediation project. This is an EPA-driven default intended to create a less onerous standard for Superfund affordability relative to compliance cost affordability. The maximum value that the model will accept for the maturity period is 30 years.

Time Period for Penalty Payment Schedule

This entry defines the length of the payment schedule for the penalty. The default value is three years.

A longer time period will lower the annual payment burden but also increase the total interest payments, with the net effect possibly of increasing the affordability. A longer time period will also

---

[16] (...continued)
a more detailed explanation.

[17] This is a burden because it extends the period over which the municipality is able to assume less debt for other expenditures. See footnote 7 for more details.

[18] This is a burden because it extends the period over which the municipality is able to assume less debt for other expenditures. See footnote 7 for more details.

extend the annual payment burden (even though it is lower) over a longer period of time, an important economic burden that is not a direct factor in the affordability calculations.[19]

The default value of three years reflects the length of the typical penalty payment schedule. The maximum value that the model will accept is five years.

Revenue Debt Interest Rate for Compliance Financing

MUNIPAY automatically derives the interest rate on revenue debt for the financing of compliance costs from one of its internal lookup tables. The lookup table contains interest rates as a function of the maturity period and debt rating. If you have specific and current information about the municipality's interest rates for recent debt issues, you can enter a custom value. Alternatively, since the data in the lookup table is updated only annually, you may wish to obtain the current interest rates for different combinations of maturity period and debt rating from the Rating Desk at Moody's Investor Services (212/553-0315), from the current issue of the *Federal Reserve Bulletin*, Table 1.35 (Interest Rates), lines 30-32, or from the Federal Reserve web site (http://www.bog.frb.fed.us).[20] Also, in the business section of most newspapers you can find a composite interest rate for municipal bonds, representing an average of various maturity periods and ratings.

Revenue Debt Interest Rate for Superfund Financing

MUNIPAY automatically derives the interest rate on revenue debt for the financing of the Superfund cleanup cost contribution from one of its internal lookup tables. The lookup table contains interest rates as a function of the maturity period and debt rating. If you have specific and current information about the municipality's interest rates for recent debt issues, you can enter a custom value. Alternatively, since the data in the lookup table is updated only annually, you may wish to obtain the current interest rates for different combinations of maturity period and debt rating from the Rating Desk at Moody's Investor Services (212/553-0377), from the current issue of the *Federal Reserve Bulletin*, Table 1.35 (Interest Rates), lines 30-32, or from the Federal Reserve web site (http://www.bog.frb.fed.us).[21] Also, in the business section of most newspapers you can find a composite interest rate for municipal bonds, representing an average of various maturity periods and ratings.

---

[19] This is a burden because it extends the period over which the municipality is able to assume less debt for other expenditures. See footnote 7 for more details.

[20] See footnote 10 for more details.

[21] See footnote 10 for more details.

Federal Funds Interest Rate for Penalty Payment Schedule

The default value for the interest rate of the penalty payment schedule is the Federal Funds rate. Since this value is updated only annually, you may wish to obtain the most up-to-date value from the business section of most newspapers.

Minimum Value for General Fund Unreserved Balance as a % of Budgeted/Anticipated Expenditures and Net Transfers Out[22]

The default value is five percent for the minimum value of the General Fund unreserved balance as a percentage of budgeted/anticipated expenditures and net transfers out. Any portion of the unreserved fund balance above this amount is considered currently available for environmental expenditures. The default value is based upon recommendations from the public finance and management literature.[23] The higher the value, the lower the ability to pay might be. The model will not accept a value below the default of five percent.

You should increase this value only if you believe the municipality's revenues and/or expenditures are subject to significantly higher than average variability (e.g., a significant portion of revenues from a tax with an unstable base, frequent weather emergencies that lead to unexpected expenditures, etc.). Such variability could justify the maintenance of a fund balance exceeding five percent to cover revenue shortfalls or emergency expenditures. You would therefore enter a value above five percent to reflect the municipality's particular situation.

Minimum Value for Enterprise Fund Working Capital as a % of Budgeted/Anticipated Expenses and Net Transfers Out

The default value is five percent for the minimum value of the enterprise fund working capital balance as a percentage of budgeted/anticipated expenditures and net transfers out. Any portion of the working capital balance above this amount is considered currently available for environmental expenditures. The default value is based upon recommendations from the public

---

[22] This entry does not appear for an independent and publicly owned utility.

[23] Moody's Investors Services, *Moody's on Municipals: An Introduction to Issuing Debt* (1991), p. 27; Freda S. Johnson, "Credit Fundamentals — The Rating Agency Perspective," *The Handbook of Municipal Bonds and Public Finance*, eds. Robert Lamb, James Leigland, and Stephen Rappaport (1993), p. 124; Claire Gorham Cohen, "Analyzing Government Credit," *The Handbook of Municipal Bonds and Public Finance*, eds. Robert Lamb, James Leigland, and Stephen Rappaport (1993), p. 134; Lon Sprecher, "Operating Budgets," *Local Government Finance: Concepts and Practices*, eds. John E. Petersen and Dennis R. Strachota (1991), p. 62; Robert N. Anthony and David W. Young, *Management Control in Nonprofit Organizations* (1988), p. 540.

finance and management literature. The higher the value, the lower the ability to pay might be. The model will not accept a value below the default of five percent.

You should increase this value only if you believe the enterprise fund's revenues and/or expenditures are subject to significantly higher than average variability (e.g., a significant portion of revenues from user fees from an unstable source, frequent weather emergencies that lead to unexpected expenditures, etc.). Such variability could justify the maintenance of a working capital balance exceeding five percent to cover revenue shortfalls or emergency expenditures. You would therefore enter a value above five percent to reflect the municipality's particular situation.

Maximum Value for Increase in User Charges on 90,000 Gallon Consumption as a % of Median Household Income

The default value is 1.0 percent for the maximum value of a user charge increase on 90,000 gallon consumption as a percentage of median household income. (The 90,000 gallon level is a standard approximation of typical household water or wastewater use. If the enterprise fund is not a water or wastewater fund, then the user charges represent the municipality's estimate of a typical household bill.)

MUNIPAY calculates the additional annual user charges that the average household will need to pay for the municipality to finance the environmental expenditures, and checks that these annual user charges do not exceed the specified percentage of median household income. The higher the threshold value, the higher the ability to pay might be.

The intent of the default value is to correspond very roughly with the recommended maximum user fee burdens for households under various EPA policy guidelines.[24] The model will accept any value.

Maximum Value for Total User Charges on 90,000 Gallon Consumption as a % of Median Household Income

The default value is 2.0 percent for the maximum value of total user charges on 90,000 gallon consumption as a percentage of median household income. (The 90,000 gallon level is a standard approximation of typical household water or wastewater use. If the enterprise fund is not a water

[24] For a summary of these, see *Evaluating Municipal Environmental Burdens*, prepared for the U.S. EPA Office of Policy, Planning, and Evaluation, by The Cadmus Group, Inc., September 30, 1994. See also U.S. EPA Office of Water, *Combined Sewer Overflows — Guidance for Financial Capability Assessment and Schedule Development*, March 1997; and U.S. EPA Region V Water Division, *Interim Procedures for Conducting Municipal Financial Capability Analysis in Support of Water Enforcement Actions*, June 1997.

or wastewater fund, then the user charges represent the municipality's estimate of a typical household bill.)

MUNIPAY calculates the total annual user charges that the average household will need to pay for the municipality to finance the environmental expenditures, and checks that these annual user charges do not exceed the specified percentage of median household income. The higher the threshold value, the higher the ability to pay is likely to be.

The intent of the default value is to correspond very roughly with the recommended maximum user fee burdens for households under various EPA policy guidelines.[25] The model will accept any value.

Minimum Value for Debt Service Coverage Ratio

The minimum value is 120 percent for the debt service coverage ratio. The debt service coverage ratio divides net operating revenue (total operating expenses minus revenue) by annual principal and interest payments. This ratio determines affordability in conjunction with the user charge burden ratios. MUNIPAY calculates the user charge increase that is necessary to cover the debt service for the environmental expenditures at the level this value specifies, and then checks if this user charge increase falls within the values the user charge burden ratios specify.

The default value represents an adequate yet not excessive coverage of debt service requirements.[26] The model will accept any value from 100 to 160.

Maximum Value for Debt-to-Equity Ratio

The maximum value is 200 percent for the debt-to-equity ratio. The debt-to-equity ratio divides total debt by total equity (assets minus debt). The calculations for future financing of

---

[25] For a summary of these, see *Evaluating Municipal Environmental Burdens*, prepared for the U.S. EPA Office of Policy, Planning, and Evaluation, by The Cadmus Group, Inc., September 30, 1994. See also U.S. EPA Office of Water, *Combined Sewer Overflows — Guidance for Financial Capability Assessment and Schedule Development*, March 1997; and U.S. EPA Region V Water Division, *Interim Procedures for Conducting Municipal Financial Capability Analysis in Support of Water Enforcement Actions*, June 1997.

[26] Moody's Investors Services, *Moody's on Municipals: An Introduction to Issuing Debt* (1991), p. 26; David Ambler, James Burr, Katherine McManus, Howard Mischel, and Diana Roswick, "Revenue Bond Credit Analysis," *The Handbook of Municipal Bonds and Public Finance*, eds. Robert Lamb, James Leigland, and Stephen Rappaport (1993), p. 154; John E. Petersen and Thomas McLoughlin, "Debt Policies and Procedures," *Local Government Finance: Concepts and Practices*, eds. John E. Petersen and Dennis R. Strachota (1991), p. 278; Standard and Poor's Corporation, *S&P's Municipal Finance Criteria* (1999), p. 78.

environmental expenditures limit additional debt issuance such that it will not cause the debt-to-equity ratio to exceed the specified value.

The default value represents a debt-to-equity ratio that would be quite high for a for-profit company and at the high end of actual municipal enterprise funds.[27] Even higher values, however, are feasible without necessarily leading to severe fiscal problems, although an enterprise fund's credit rating could suffer from an exceedingly high debt-to-equity ratio. The model will accept any value.

2. Viewing and Interpreting Results

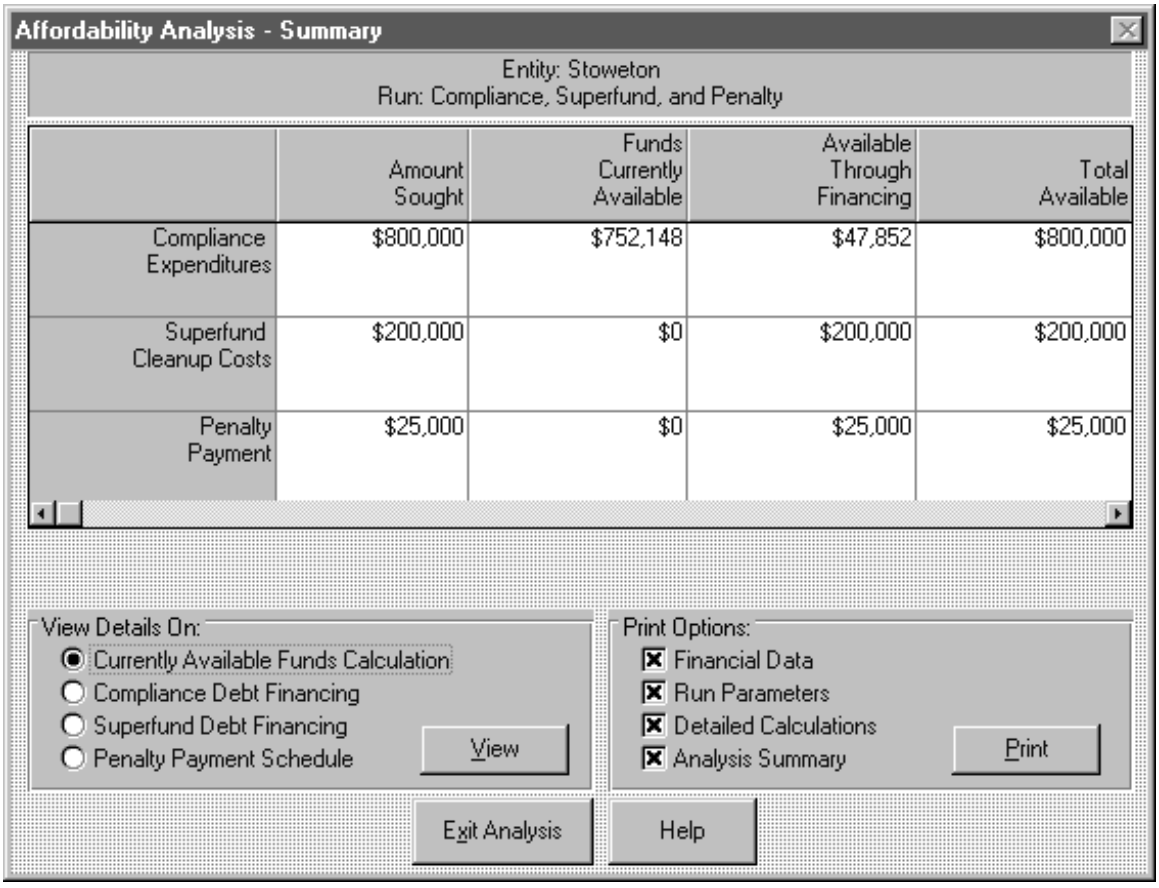
To perform an affordability analysis, use your mouse to highlight the case title. Then click the "Run" button. The first screen you will see is the affordability analysis summary. The following sections describe this first screen and the other screens that you can view.

a. Affordability Analysis Summary

Exhibit 4-6 provides an example of the affordability analysis summary. The three rows in the table at the top of the screen correspond to the three types of environmental expenditures. The first column displays the amount sought for each type of expenditure. The second column displays the amount of funds that are currently available to pay for the expenditures. (An analysis for a municipality with an enterprise fund would instead display two separate columns for enterprise funds currently available and for General Funds currently available.) The third column displays the funds that are available through financing. The final column displays the total available, which simply adds together the second and third columns.

[27] Clyde P. Stickney, *Financial Statement Analysis: A Strategic Perspective*, p. 240.

Exhibit 4-6
AFFORDABILITY ANALYSIS SUMMARY



If the amount in the final column is equal to the sought amount in the first column, then the sought amount is affordable within the specified run parameters. If the amount in the final column is less than the sought amount, then the sought amount is not affordable within the specified run parameters, and the amount in the final column is instead the maximum affordable amount.

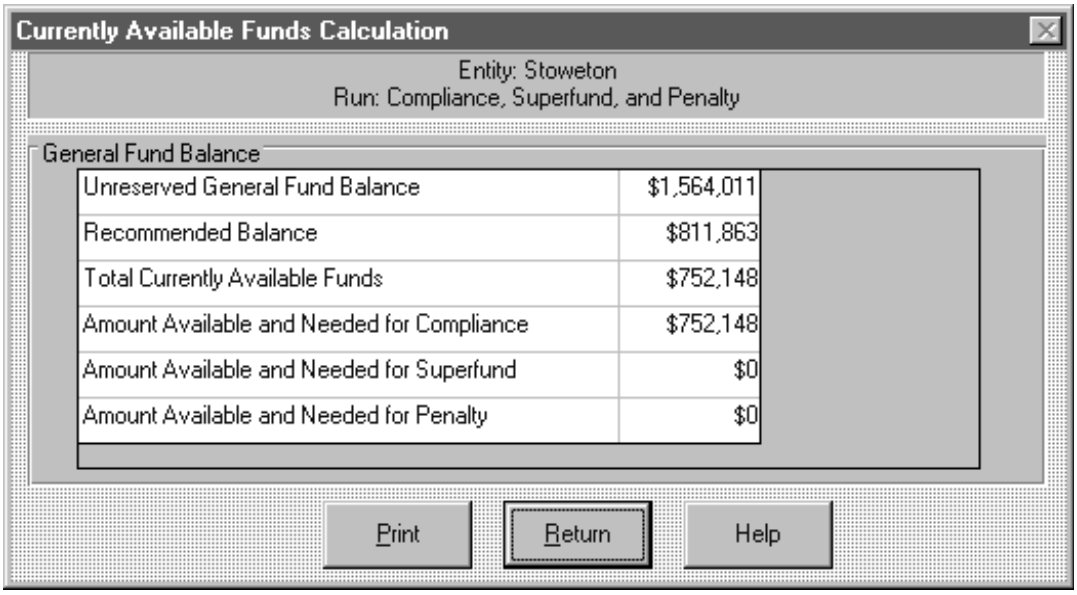
The box in the bottom left of the screen allows you to view the details on the currently available funds calculations and the debt financing or payment schedule for the sought types of environmental expenditures. (The selection for types of expenditures that are not sought will be "grayed-out.") To view a set of details, simply move your mouse to click on the desired option, and then click "View." The following sections explain how to interpret these screens.

The box in the bottom right of the screen allows you to print your data and results. Use your mouse to click in the check-boxes of the screens you want to select, then click on "Print." You can also print these screens using the standard "Print" from within each individual screen.

b. Currently Available Funds Calculation

Exhibit 4-7 provides an example of the screen for a currently available funds calculation for a city, town, village or county. The recommended unreserved General Fund balance is equal to the budgeted/anticipated expenditures plus net transfers out times the safety factor (whose default value is five percent). MUNIPAY subtracts the recommended balance from the unreserved balance to determine the total amount of currently available funds. If you maintain MUNIPAY's default priorities, these funds first pay for compliance costs, then a Superfund cost contribution, and finally a penalty payment. If you alter the priority, the funds will be allocated by the order of your priorities.

Exhibit 4-7
CURRENTLY AVAILABLE FUNDS CALCULATION FOR CITY, TOWN, VILLAGE, OR COUNTY

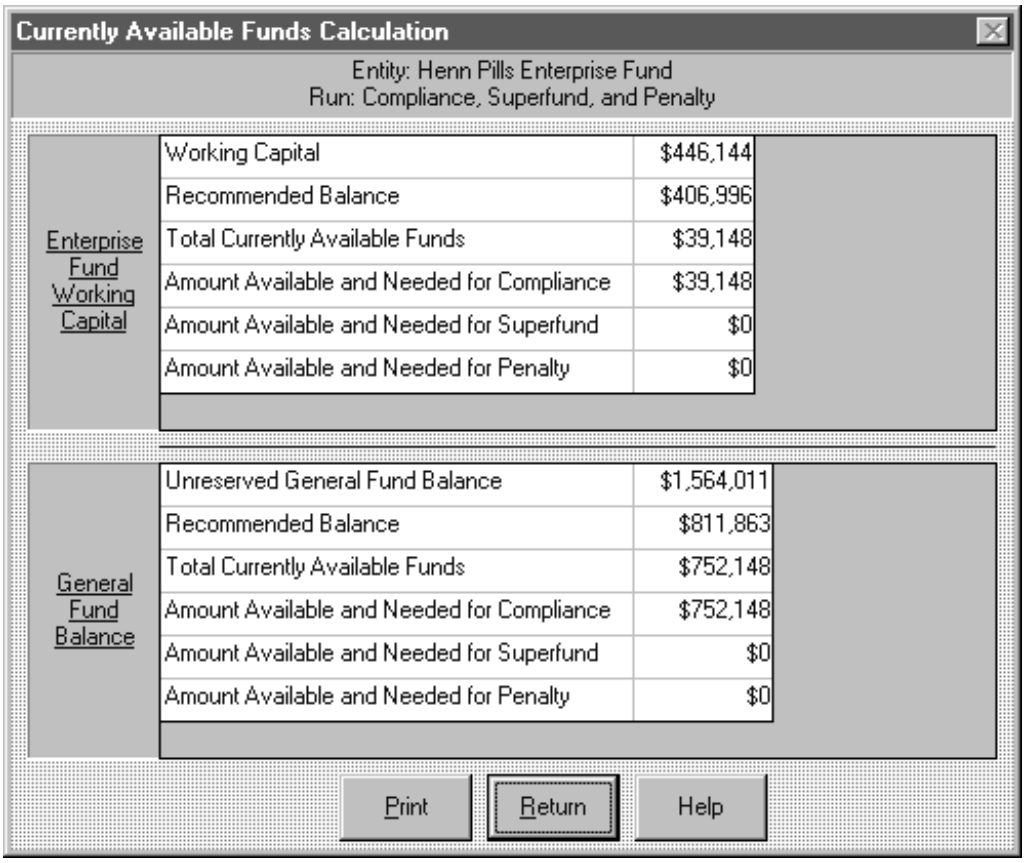


For a case with a relevant enterprise fund, Exhibit 4-8 provides an example of the screen for the currently available funds calculation.[28] The table format for the General Fund balance is the same as in Exhibit 4-7. The screen adds an additional table for enterprise fund working capital. Working capital is equal to the enterprise fund's current assets minus its current liabilities. The table is otherwise the same as that for the General Fund.

For an independent and publicly owned utility, the currently available funds screen would be identical to that for the municipality with an enterprise fund, minus the table for the General Fund.

[28] MUNIPAY selects the appropriate screen automatically, based upon the municipality type that the user specified when first creating the case.

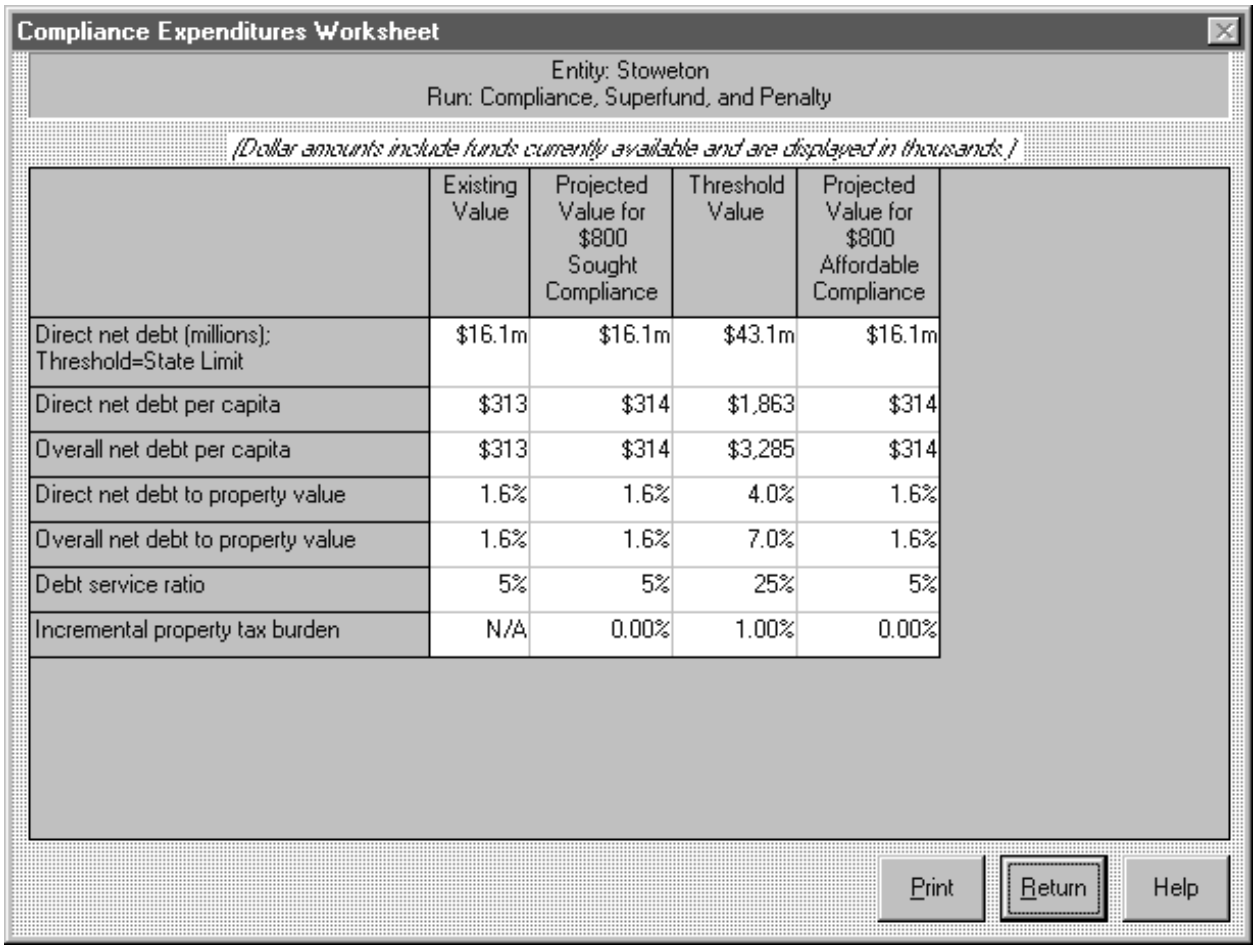
Exhibit 4-8
CURRENTLY AVAILABLE FUNDS CALCULATION FOR MUNICIPALITY WITH ENTERPRISE FUND



c. Debt Financing and Payment Schedule

Exhibit 4-9 provides an example of the screen for debt financing of compliance costs, in a case involving a city, town, village, or county. The rows correspond to the different financial criteria. The first column displays the existing values for the criteria. This allows the user to examine the current financial condition of the municipality before it must pay for environmental expenditures. The second column displays the projected values for the criteria were the municipality to pay for the full amount of the sought compliance costs, which is displayed in units corresponding to thousands of dollars. (Some of the payment for the sought compliance costs could include the previously calculated currently available funds, which the criteria values reflect but the column headings do not.) The third column displays the threshold values for the criteria. The threshold values are either the default values or the custom values that the user specified in the run parameters screen. (The threshold value for the direct debt level is equal to the state limit, which the municipality supplies on its data request form and the user then enters in the financial data screen, not the run parameters screen.)

Exhibit 4-9
COMPLIANCE DEBT FUNDING DETAILS FOR
CITY, TOWN, VILLAGE, OR COUNTY



Compliance Expenditures Worksheet

Entity: Stoweton
Run: Compliance, Superfund, and Penalty

(Dollar amounts include funds currently available and are displayed in thousands.)

	Existing Value	Projected Value for $800 Sought Compliance	Threshold Value	Projected Value for $800 Affordable Compliance
Direct net debt (millions); Threshold=State Limit	$16.1m	$16.1m	$43.1m	$16.1m
Direct net debt per capita	$313	$314	$1,863	$314
Overall net debt per capita	$313	$314	$3,285	$314
Direct net debt to property value	1.6%	1.6%	4.0%	1.6%
Overall net debt to property value	1.6%	1.6%	7.0%	1.6%
Debt service ratio	5%	5%	25%	5%
Incremental property tax burden	N/A	0.00%	1.00%	0.00%

Print Return Help

If the projected values from the sought compliance amount all fall within the threshold values, then the sought amount is affordable within the specified run parameters. Therefore the final column for the maximum compliance amount essentially repeats the second column. If the projected values exceed any of the threshold values, then the sought amount is not affordable within the specified run parameters. Therefore the final column displays the values for a maximum compliance amount that is less than the sought amount.

Exhibit 4-10 provides an example of the screen for debt financing of compliance costs for a municipality with a relevant enterprise fund or for an independent and publicly owned utility. The screen is essentially the same as Exhibit 4-9, except the rows display the criteria that are relevant to the revenue debt of an enterprise fund, as opposed to the general obligation debt of a municipality. Note that the projected values for the debt service coverage ratio are always equal to the threshold value, regardless of the existing value or level of compliance costs. This is because MUNIPAY always raises (or lowers) the existing debt service coverage ratio to its threshold value, and then determines whether the user charges fall within the values for household burdens.

Exhibit 4-10
COMPLIANCE DEBT FUNDING DETAILS FOR MUNICIPALITY WITH ENTERPRISE FUND OR FOR INDEPENDENT AND PUBLICLY OWNED UTILITY

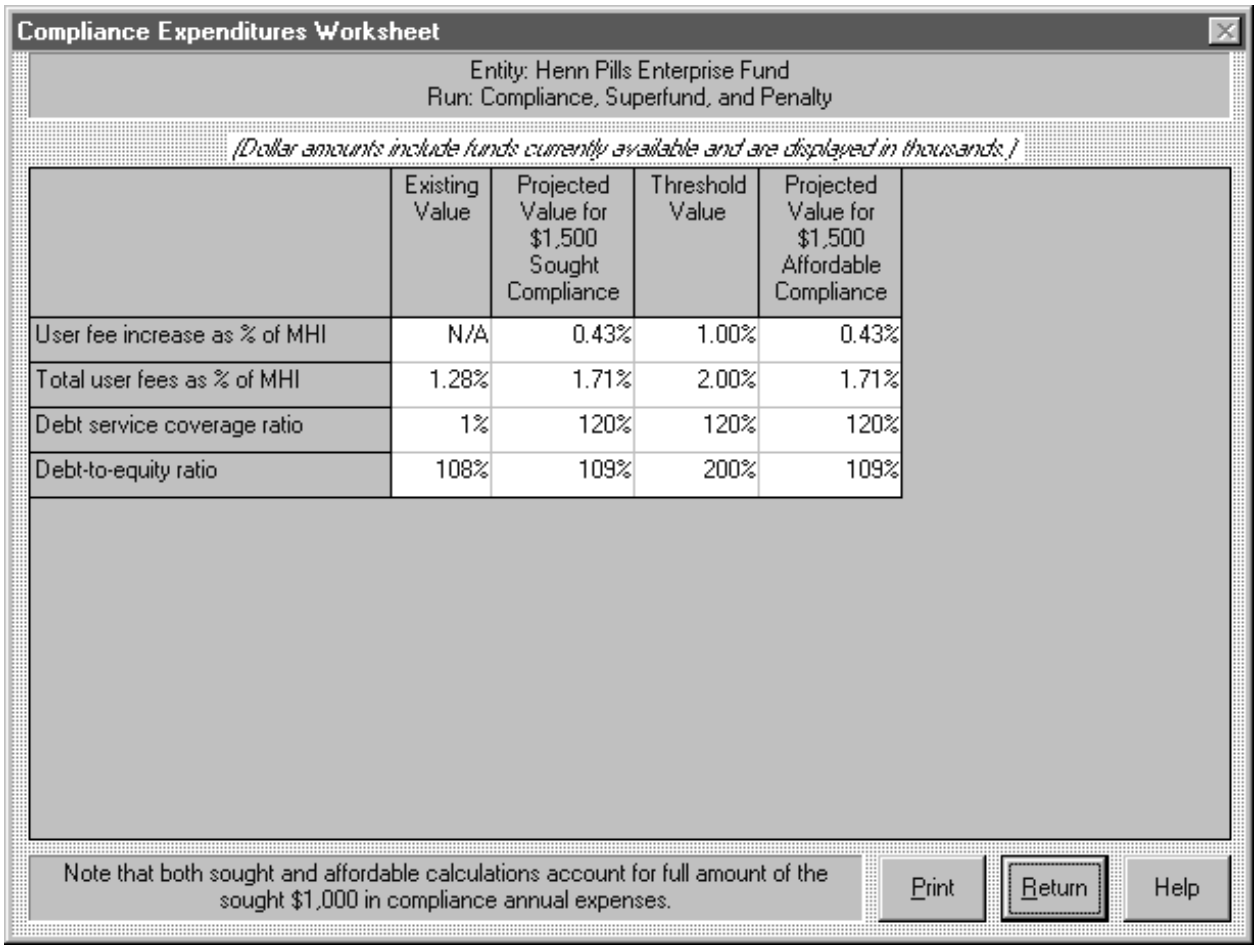
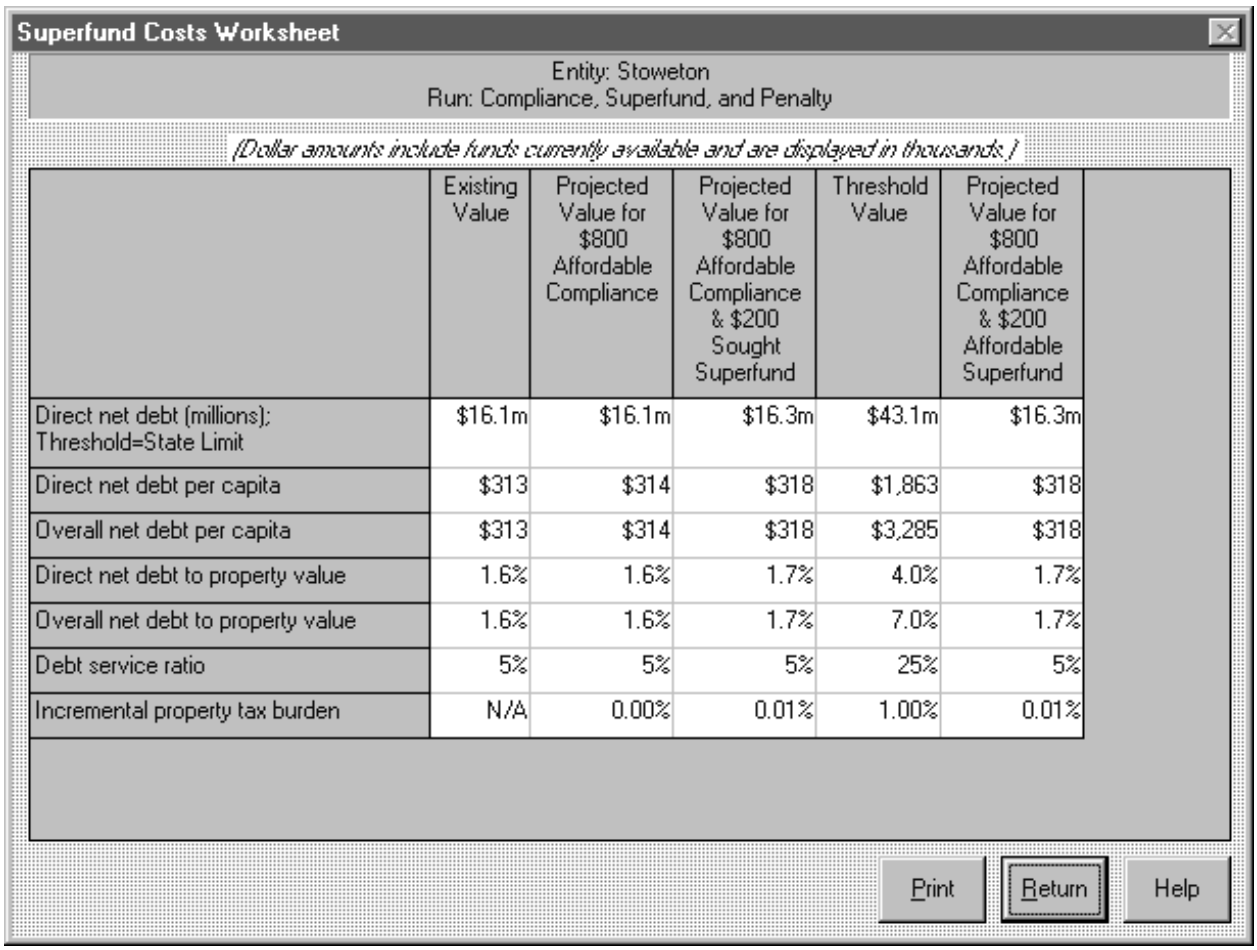


Exhibit 4-11 provides an example of debt financing for a Superfund cleanup contribution for a city, town, village, or county. The table has essentially the same structure as Exhibit 4-9, except that in addition to the first column for the existing values it also displays a column for the projected values from the maximum affordable compliance cost amount. The column is the same as the final column from Exhibit 4-9, and thus Exhibit 4-11 essentially picks up where Exhibit 4-9 left off, i.e., taking the financing of the maximum affordable compliance cost amount as the new baseline on top of which to add the sought Superfund contribution financing. The screen therefore shows how the new debt issue for a Superfund cleanup contribution must come on top of the new debt issue that is necessary for the compliance costs. Therefore, less debt capacity is left for the Superfund contribution.

Exhibit 4-11
SUPERFUND DEBT FINANCING DETAILS FOR
CITY, TOWN, VILLAGE, OR COUNTY



Superfund Costs Worksheet

Entity: Stoweton
Run: Compliance, Superfund, and Penalty

(Dollar amounts include funds currently available and are displayed in thousands.)

	Existing Value	Projected Value for $800 Affordable Compliance	Projected Value for $800 Affordable Compliance & $200 Sought Superfund	Threshold Value	Projected Value for $800 Affordable Compliance & $200 Affordable Superfund
Direct net debt (millions); Threshold=State Limit	$16.1m	$16.1m	$16.3m	$43.1m	$16.3m
Direct net debt per capita	$313	$314	$318	$1,863	$318
Overall net debt per capita	$313	$314	$318	$3,285	$318
Direct net debt to property value	1.6%	1.6%	1.7%	4.0%	1.7%
Overall net debt to property value	1.6%	1.6%	1.7%	7.0%	1.7%
Debt service ratio	5%	5%	5%	25%	5%
Incremental property tax burden	N/A	0.00%	0.01%	1.00%	0.01%

Print Return Help

Exhibit 4-12 provides an example of a penalty payment schedule for a city, town, village, or county. The table follows the pattern of Exhibit 4-11, adding on the debt from compliance costs and the Superfund contribution before assessing the penalty payment schedule. Therefore, even less debt capacity is left for the penalty payment.

Exhibit 4-12
PENALTY PAYMENT SCHEDULE DETAILS FOR CITY, TOWN, VILLAGE, OR COUNTY

Penalty Payment Worksheet

Entity: Stoweton
Run: Compliance, Superfund, and Penalty

(Dollar amounts include funds currently available and are displayed in thousands.)

	Existing Value	Projected Value for $800 Affordable Compliance	Projected Value for $800 Affordable Compliance & $200 Affordable Superfund	Projected Value for $800 Affordable Compliance & $200 Affordable Superfund & $25 Sought Penalty	Threshold Value	Projected Value for $800 Affordable Compliance & $200 Affordable Superfund & $25 Affordable Penalty
Direct net debt (millions); Threshold=State Limit	$16.1m	$16.1m	$16.3m	$16.4m	$43.1m	$16.4m
Direct net debt per capita	$313	$314	$318	$318	$1,863	$318
Overall net debt per capita	$313	$314	$318	$318	$3,285	$318
Direct net debt to property value	1.6%	1.6%	1.7%	1.7%	4.0%	1.7%
Overall net debt to property value	1.6%	1.6%	1.7%	1.7%	7.0%	1.7%
Debt service ratio	5%	5%	5%	5%	25%	5%
Incremental property tax burden	N/A	0.00%	0.01%	0.01%	1.00%	0.01%

Print Return Help

Exhibit 4-13 and 4-14 provide the analogous screens for a municipality with an enterprise fund or for an independent and publicly owned utility. The analysis uses a different set of criteria, but the results format and overall methodology are the same.

Exhibit 4-13
SUPERFUND DEBT FINANCING DETAILS FOR MUNICIPALITY WITH ENTERPRISE FUND OR FOR INDEPENDENT AND PUBLICLY OWNED UTILITY

Superfund Costs Worksheet

Entity: Henn Pills Enterprise Fund
Run: Compliance, Superfund, and Penalty

(Dollar amounts include funds currently available and are displayed in thousands.)

	Existing Value	Projected Value for $1,500 Affordable Compliance	Projected Value for $1,500 Affordable Compliance & $500 Sought Superfund	Threshold Value	Projected Value for $1,500 Affordable Compliance & $500 Affordable Superfund
User fee increase as % of MHI	N/A	0.43%	0.45%	1.00%	0.45%
Total user fees as % of MHI	1.28%	1.71%	1.73%	2.00%	1.73%
Debt service coverage ratio	1%	120%	120%	120%	120%
Debt-to-equity ratio	108%	109%	110%	200%	110%

Note that both sought and affordable calculations account for full amount of the sought $1,000 in compliance annual expenses.

Print | Return | Help

Exhibit 4-14
PENALTY PAYMENT SCHEDULE DETAILS FOR
MUNICIPALITY WITH ENTERPRISE FUND
OR FOR INDEPENDENT AND PUBLICLY OWNED UTILITY

Penalty Payment Worksheet

Entity: Stoweton
Run: Compliance, Superfund, and Penalty

(Dollar amounts include funds currently available and are displayed in thousands.)

	Existing Value	Projected Value for $800 Affordable Compliance	Projected Value for $800 Affordable Compliance & $200 Affordable Superfund	Projected Value for $800 Affordable Compliance & $200 Affordable Superfund & $25 Sought Penalty	Threshold Value	Projected Value for $800 Affordable Compliance & $200 Affordable Superfund & $25 Affordable Penalty
Direct net debt (millions); Threshold=State Limit	$16.1m	$16.1m	$16.3m	$16.4m	$43.1m	$16.4m
Direct net debt per capita	$313	$314	$318	$318	$1,863	$318
Overall net debt per capita	$313	$314	$318	$318	$3,285	$318
Direct net debt to property value	1.6%	1.6%	1.7%	1.7%	4.0%	1.7%
Overall net debt to property value	1.6%	1.6%	1.7%	1.7%	7.0%	1.7%
Debt service ratio	5%	5%	5%	5%	25%	5%
Incremental property tax burden	N/A	0.00%	0.01%	0.01%	1.00%	0.01%

Print Return Help

This technical appendix provides the methodology and detailed calculations that MUNIPAY uses to determine a municipality's ability to afford environmental expenditures. MUNIPAY performs two separate analyses: a demographic comparison, and an affordability calculation. This appendix provides the underlying basis for each analysis in separate sections below.

A. DEMOGRAPHIC ANALYSIS

The demographic analysis uses U.S. Census data to compare the municipality to state and national norms. The comparison includes indicators for both the community's population and income. The analysis also shows how the municipality's position has changed from 1980 to 1990, both relative to itself and relative to changes in the state norms. The user must enter the data for the municipality; MUNIPAY already contains databases for national norms and all 50 states. The comparison requires no run parameters, and displays its results in a single table. The demographic analysis does not give the user a specific conclusion on the municipality's demographics, but instead provides a better understanding of long-term changes in the community's resource base.

The following sections provide the details for the demographic comparison's calculations. Exhibit A-1 below displays a list of the variable names and definitions, for both 1980 and 1990.

Exhibit A-1

DEMOGRAPHIC INPUT VARIABLES

POP	Population
NOFAM	Number of families
NOABV18	Population above 18 years old
NOABV65	Population above 65 years old
NOINDPOV	Number of individuals below 125% of the poverty level
MEDHV	Median home value
MEDHHINC	Median household income

1. Municipality as of 1990: Calculations

a. Population = The value that the user entered

b. Percent population below 18 =

$$\frac{POP - NOABV18}{POP} \times 100$$

c. Percent population 65 and above =

$$\frac{NOABV65}{POP} \times 100$$

d. Percent individuals below 125% of poverty =

$$\frac{NOINDPOV}{POP} \times 100$$

e. Median home value = The value that the user entered

f. Median home value as percent of state =

$$\frac{MEDHV_{Municipality}}{MEDHV_{state}} \times 100$$

g. Median household income = The value that the user entered

h. Median household income as percent of state =

$$\frac{MEDHHINC_{Municipality}}{MEDHHINC_{state}} \times 100$$

2. Municipality's Change since 1980: Calculations

a. Population =

$$\left(\frac{POP_{1990}}{POP_{1980}} - 1 \right) \times 100$$

b. Percent population below 18 =

$$\left(\frac{POP_{1990} - NOABV18_{1990}}{POP_{1990}} \times 100 \right) - \left(\frac{POP_{1980} - NOABV18_{1980}}{POP_{1980}} \times 100 \right)$$

c. Percent population 65 and above =

$$\left(\frac{NOABV65_{1990}}{POP_{1990}} \times 100 \right) - \left(\frac{NOABV65_{1980}}{POP_{1980}} \times 100 \right)$$

d. Percent individuals below 125% of poverty level =

$$\left(\frac{NOINDPOV_{1990}}{POP_{1990}} \times 100 \right) - \left(\frac{NOINDPOV_{1980}}{POP_{1980}} \times 100 \right)$$

e. Median home value as percent of state =

$$\left(\frac{MEDHV_{Municipality\ 1990}}{MEDHV_{state\ 1990}} \times 100 \right) - \left(\frac{MEDHV_{Municipality\ 1980}}{MEDHV_{state\ 1980}} \times 100 \right)$$

f. Median household income as percent of state =

$$\left(\frac{MEDHHINC_{Municipality\ 1990}}{MEDHHINC_{state\ 1990}} \times 100 \right) - \left(\frac{MEDHHINC_{Municipality\ 1980}}{MEDHHINC_{state\ 1980}} \times 100 \right)$$

B. AFFORDABILITY ANALYSIS

The affordability analysis includes calculations for the amount of currently available funds and then, if necessary, the amount of funds available through financing. The user can accept MUNIPAY's default values for the run parameters, or customize them. The currently available funds calculation looks for any excess monies in the municipality's "General Fund" balance and, if applicable to the case, its "enterprise fund" working capital balance. If currently available funds are not sufficient to afford the environmental expenditures, the affordability analysis then assesses the municipality's current debt burden and its ability to take on additional debt to finance the environmental expenditures. MUNIPAY displays a summary table for the affordable level of environmental expenditures, plus exhibits detailing the municipality's current condition and its projected condition from the sought and affordable level of expenditures.

MUNIPAY can evaluate a municipality's ability to afford three distinct types of environmental expenditures: compliance costs, Superfund cleanup contributions, and penalty payments. In cases that involve more than one type of expenditure, the user can select the priority for the different types of expenditures. MUNIPAY's default setting is for compliance costs to receive the highest priority, then a Superfund cleanup contribution, and finally a penalty payment. MUNIPAY will therefore, if necessary, apply all of the municipality's funding capability toward a higher-priority environmental expenditure leaving no funds available for lower-priority expenditures.

1. Currently Available Funds

In cases where the entity is a city, town, village, or county, MUNIPAY will determine whether the municipality's General Fund has an unreserved fund balance that can provide any currently available funds for the sought environmental expenditures. If the municipality also has an enterprise fund that is relevant to the environmental expenditures, then MUNIPAY will first determine whether the municipality's enterprise fund has a working capital balance that can provide any currently available funds for the sought environmental expenditures, and then, if necessary, also examine the General Fund. If the municipality is an independent and publicly owned utility distinct from any individual local jurisdiction, then MUNIPAY will examine only the utility's enterprise fund working capital balance.

In cases that involve more than one type of environmental expenditure, MUNIPAY's protocol will therefore, if necessary, apply all of the municipality's currently available funds toward a higher-priority environmental expenditure leaving no funds available for lower-priority expenditures.

The following sections provide the calculations behind the separate analyses for the General Fund and enterprise fund. Exhibit A-2 below displays a list of all variable names and their definitions that the calculations use.

Exhibit A-2

CURRENTLY AVAILABLE FUNDS INPUT VARIABLES

UNRES	General Fund ending unreserved balance
CURAST	Enterprise fund current assets (excluding restricted assets)
CURLIAB	Enterprise fund current liabilities (payable from current assets)
GFBDGEXP	Next year's General Fund budgeted/anticipated expenditures and net transfers out
EFBDGEXP	Next year's enterprise fund budgeted/anticipated expenses and net transfers out
GFMINVAL	Minimum value for General Fund unreserved balance as a percentage of anticipated expenditures and net transfers out (default value is 5%)
EFMINVAL	Minimum value for enterprise fund working capital balance as a percentage of anticipated expenses and net transfers out

a. General Fund

To calculate the currently available funds from the General Fund, the model first calculates a recommended unreserved balance, based on a percentage of anticipated expenditures and net transfers out, which a municipality should maintain as a safety factor. The model compares this recommended balance with the ending unreserved balance to determine if any excess funds are available. These calculations generate the output variables that appear below in Exhibit A-3. The formulas that the model uses to perform the calculations follow.

Exhibit A-3

CURRENTLY AVAILABLE FUNDS OUTPUTS
General Fund

RECBAL	General Fund recommended unreserved balance
GFCURFND	General Fund currently available funds

General Fund recommended unreserved balance:

$$RECBAL = GFMINVAL \times GFBDGEXP$$

General Fund currently available funds:

$$GFCURFND = UNREBAL - RECBAL$$

b. Enterprise Fund

For municipalities with a relevant enterprise fund, the model calculates the currently available funds from the enterprise fund's working capital balance. If these funds are not sufficient to pay for the environmental expenditures, then it also calculates the currently available funds from the General Fund balance as above. (For publicly owned utilities the model calculates only the currently available funds from the utility's working capital balance.)

Calculations for currently available funds from the working capital balance of an enterprise fund or utility are similar to those outlined above. The model first calculates the fund's current working capital balance. This allows the model then to compute a recommended working capital balance as a percentage of anticipated expenses and net transfer out, and compare this with the current working capital balance to determine if any excess funds are available. These calculations generate the output variables that appear in Exhibit A-4 on the following page. The formulas that the model uses to perform the calculations follow.

Exhibit A-4 CURRENTLY AVAILABLE FUNDS OUTPUTS Enterprise Fund or Utility	
WRKCAP	Enterprise fund working capital balance
EFEXPBDG	Enterprise fund budgeted/anticipated expenses and net transfers out
RECWRK	Enterprise fund recommended working capital balance
EFCURFND	Enterprise fund currently available funds

Enterprise fund working capital balance:

$$WRKCAP = CURAST - CURLIAB$$

Enterprise fund recommended working capital balance:

$$RECWRK = EFMINVAL \times EFBDGEXP$$

Enterprise fund currently available funds:

$$EFCURFND = WRKCAP - RECWRK$$

2. Funds Available through Financing

If currently available funds from the General Fund unreserved fund balance and/or the enterprise fund working capital balance are insufficient to cover the full amount of the sought environmental expenditures, MUNIPAY examines the funds available through future debt financing. Debt financing can take the form of bond issues to pay for compliance costs or Superfund cleanup contributions, or a payment schedule for a penalty. The amount of sought debt financing is equal to the total sought amount minus currently available funds.[1]

For a city, town, village, or county without an enterprise fund relevant to the environmental expenditures, MUNIPAY examines the capacity for general obligation bonds.[2] If the municipality has a relevant enterprise fund, MUNIPAY examines the capacity for revenue bonds.[3] In either case,

---

[1] MUNIPAY also adds a small percentage to debt financing of compliance costs and Superfund contributions to account for the transaction costs of issuing bonds.

[2] General obligation bonds, often called full faith and credit bonds, derive their repayment security from the full taxing and revenue-generating capacity of a municipality. Debt service payments for these types of bonds come from local taxes, usually the local property tax. If levied taxes are insufficient to meet payments, the local authority is legally required to raise the tax rate or broaden the tax base to generate sufficient funds.

[3] Revenue bonds derive their repayment security from the revenues that the debt-funded project (continued...)

MUNIPAY first computes various ratios that indicate the municipality's current debt burden. After this computation it determines if the highest-priority category of the sought environmental expenditures are affordable and, if not, what the maximum affordable amount is. Keeping with the hierarchy of the three types of environmental expenditures, MUNIPAY then examines the debt capacity remaining for the next-highest priority of environmental expenditures, and then the final category. If necessary, MUNIPAY will exhaust all of the municipality's debt capacity on higher-priority environmental expenditures, leaving no financing available for lower-priority expenditures.

The following sections provide the details for these calculations.

a. General Obligation Debt

For a city, town, village, or county, MUNIPAY assesses the municipality's ability to finance new general obligation debt. In broad terms, MUNIPAY analyzes the municipality's current and projected obligations from the perspective of three criteria: total debt stock (i.e., various measures of the total amount of debt), annual debt flow (i.e., debt service or payments), and incremental household burden.

The analysis proceeds through the examination of several ratios that are relevant to the criteria listed above. The specific ratios that the model analyzes include:

- State-government-imposed direct net debt limit
- Direct net debt per capita
- Overall net debt per capita
- Direct net debt to property value
- Overall net debt to property value
- Debt service ratio
- Property tax incremental burden

For each ratio, MUNIPAY calculates the existing value, then analyzes the impact of the proposed new financing burden on these ratios — beginning with the highest-priority sought expenditures — and compares the projections with threshold values for each ratio. If any of the projected ratios exceeds its threshold value, the total proposed financing is not affordable, and the model calculates the maximum amount of new financing that is affordable. If the amount sought is affordable, the model then performs the same analysis for the next-highest priority expenditures.

The model contains default values for the ratio thresholds and run parameters (e.g., interest rates, bond maturity periods). The user may modify these values if a particular analysis warrants it.

---

[3] (...continued)
generates. For example, wastewater disposal charges cover debt service on bonds issued to build a new wastewater treatment plant. Hence, the cost of these bonds is borne by those paying for the services the funded project provides.

A full list of these parameters, their definitions, and their default values appear in Exhibit A-5. In addition, the user must provide certain input variables, including the sought amounts, for MUNIPAY to perform its analysis. A list of these input variables and their definitions appears in Exhibit A-6.

Using these parameters and inputs, MUNIPAY first performs some preliminary calculations, including the existing ratios discussed above. MUNIPAY then proceeds to test the thresholds, first (assuming the default hierarchy of priorities) for compliance costs, then for Superfund contributions, and finally for penalty payments. The formulas to calculate and test the ratios appear below. To avoid duplication, the text documents the formulas for compliance costs only. While some parameters are specific to the type of environmental expenditure (e.g., interest rate and maturity period), the same basic formulas still apply to the ratios. The additional debt necessary to finance the highest-priority environmental expenditure, however, is included in the analysis of the municipality's ability to afford new debt for subsequent environmental expenditures.

Exhibit A-5

PARAMETERS FOR AFFORDABILITY ANALYSIS
General Obligation Debt

COMPYRS	Maturity period for bond to finance compliance capital & one-time costs (default = 25 yrs)
SUPYRS	Maturity period for note to finance Superfund cost contribution (default = 5 yrs)
PENYRS	Time period for penalty payment schedule (default = 3 yrs)
COMPINT	General obligation debt interest rate for compliance financing (default based on entity's bond rating, assuming 25-yr bond)
SUPINT	General obligation debt interest rate for Superfund financing (default based on entity's bond rating, assuming 5-yr note)
PENINT	Federal funds interest rate for penalty payment schedule (default is Federal funds rate)
GFMINVAL	Minimum value for General Fund unreserved balance as a percentage of budgeted/anticipated cash out flows (default = 5%)
MAXINCR	Maximum value for increase in property taxes in median home value as a percentage of median household income (default = 1.0%)
MAXSERV	Maximum value for debt service ratio (default = 25%)
MAXDCP	Maximum value for direct net debt per capita (default based on Moody's national medians values for entities of similar type and size, increased by multiplying factor)
MAXOCP	Maximum value for overall net debt per capita (default same as above)
MAXDPRP	Maximum value for direct net debt as a percentage of market value for taxable property (default same as above)
MAXOPRP	Maximum value for overall net debt as a percentage of market value for taxable property (default same as above)
MOODYS	Multiplying factor applied to Moody's national median values (default = 2.5)

Exhibit A-6

INPUT VARIABLES FOR AFFORDABILITY ANALYSIS
General Obligation Debt

COMPCAP	Amount sought for compliance capital and one-time expenditures
COMPANN	Amount sought for compliance annual expenditures
SUPERFUN	Amount sought for Superfund cleanup contribution
PENPAY	Amount sought for penalty payment
CURREVS	Total revenues for all governmental fund types
CURREPAY	Total principal and interest payments for all governmental fund types
TOTVAL	Total fair market value of taxable property
COLRATE	Property tax collection rate
RECPOP	Most recent estimate for population
RECYR	Year for most recent population estimate
PRIPOP	Prior estimate for population
PRIYR	Year for prior population estimate
RECMHI	Most recent estimate for median household income
MHIYR	Year for most recent median household income estimate
RECMHV	Most recent estimate for median home value
MHVYR	Year for most recent median home value estimate
CURDIR	Direct net debt
CUROVER	Overall net debt
RATING	Most recent general obligation debt rating
STATELIM	State limit for general obligation debt level
GFBDGEXP	Next year's budgeted/anticipated expenditures and net transfers out

Preliminary Calculations

MUNIPAY first generates several preliminary figures for use in subsequent calculations, which appear in Exhibit A-7 below. The formulas to derive them follow.

Exhibit A-7

AFFORDABILITY ANALYSIS PRELIMINARY CALCULATION VARIABLES
General Obligation Debt

CURPOP	Current population of municipality
CURMHI	Current median household income, equal to RECMHI adjusted for inflation to the current year using the Consumer Price Index (CPI)
CURMHV	Current median home value: RECMHV adjusted for inflation to the current year by CPI
TAXBASE	Effective proportion of taxable property on which taxes are collected (i.e., market value of taxable property multiplied by property tax collection rate)
INTRATIO	Ratio of projected total principal and interest payments to principal amount (based on interest rate and period of financing)

Current population =

$$RECPOP \times \left[\left(\frac{RECPOP}{PRIPOP} \right)^{\left(\frac{1}{RECYR \text{ — } PRIYR} \right)} \right]^{(currentyear \text{ — } PRIYR)}$$

Current median household income =

$$RECMHI \times \left(\frac{CPI_{currentyear}}{CPI_{MHIYR}} \right)$$

Current median home value =

$$RECMHV \times \left(\frac{CPI_{currentyear}}{CPI_{MHVYR}} \right)$$

Taxbase (proportion of taxable property on which taxes are collected) =

$$TOTVAL \times COLRATE$$

Ratio of projected total principal and interest payments to principal amount =

$$n \left[\frac{i(1 + i)^n}{(1 + i)^n \text{ — } 1} \right]$$

Where: i = interest rate (COMPINT, SUPINT or PENINT)
n = period of financing (COMPYRS, SUPYRS, or PENYRS)

Using these calculations and the input variables that the user has entered, MUNIPAY now calculates the existing and projected ratios for the debt stock, debt flow, and incremental property tax burden. (The existing ratios are displayed on the outputs page for comparison.) The formulas for these ratios appear below.

Debt Stock Criterion

Existing Ratios

Current direct net debt per capita (in $) = $\frac{CURDIR}{CURPOP}$

Current overall net debt per capita (in $) = $\frac{CUROVER}{CURPOP}$

Current direct net debt to property value (as %) = $\left(\frac{CURDIR}{TOTVAL} \right) \times 10$

Current overall net debt to property value (as %) = $\left(\frac{CUROVER}{TOTVAL} \right) \times 100$

Projected Ratios

Projected direct net debt per capita = $\frac{CURDIR + COMPCAP}{CURPOP}$

Projected overall net debt per capita = $\frac{CUROVER + COMPCAP}{CURPOP}$

Projected direct net debt to property value = $\left(\frac{CURDIR + COMPCAP}{TOTVAL} \right) \times 10$

Projected overall net debt to property value = $\left(\frac{CUROVER + COMPCAP}{TOTVAL} \right) \times 1$

If any of the projected ratios exceeds its specified threshold value, then the municipality is unable to finance the sought amount. In this case, the model calculates the maximum affordable amount for each of the four ratios above, based on the specified threshold values. The formulas for calculating the four threshold amounts are:

(MAXDCP × CURPOP) — CURDIR
(MAXOCP × CURPOP) — CUROVER
(MAXDPRP × TOTVAL) — CURDIR
(MAXOPRP × TOTVAL) — CUROVER

The minimum value of these four amounts is the maximum amount of new debt stock that the municipality can afford.

Debt Flow Criterion

Existing debt service ratio = $\frac{CURREPAY}{CURREVS}$

Projected debt service ratio = $\frac{(CURREPAY + NEWSERV)}{(CURREVS + NEWSERV)}$

Where: NEWSERV (the projected amount of annual new debt service as a result of sought compliance expenditures) =

$$COMPCAP \times \frac{INTRATIO}{COMPYRS}$$

If the projected debt service ratio exceeds the threshold, then MUNIPAY calculates the maximum affordable new debt service, and from this calculates the maximum amount that the municipality can afford to finance. If this maximum amount is greater than the amount from the debt stock criterion calculations above, then the lesser amount (i.e., the debt stock amount) is the affordable amount. The following are the calculations for maximum affordable debt service and the corresponding maximum amount to be financed, based on the maximum debt service ratio.

Maximum new debt service =

$$\frac{(MAXSERV \times CURREVS) - CURPRIN - CURINT}{(1 - MAXSERV)}$$

Maximum amount to be financed =

$$Above\ amount \times \frac{COMPYRS}{INTRATIO}$$

Incremental Property Tax Burden Calculation

The final threshold ratio that MUNIPAY tests for general obligation financing is the incremental increase in household property tax burden. The model calculates the projected increase in annual property taxes for households in the municipality as a result of the new debt service incurred from the sought environmental expenditures. If this increase exceeds the specified threshold, then the model calculates the maximum affordable new debt service, and from this the maximum amount of financing that the municipality can afford. Again, if this amount is greater than the maximum amount from the debt flow criterion calculations above, the lesser amount prevails. The formulas for these calculations are as follows.

Projected increase in property tax burden =

$$\frac{NEWSERV}{TAXBASE} \times \frac{CURMHV}{CURMHI}$$

Where: NEWSERV is defined as above under Debt Flow Criterion

Maximum new debt service =

$$\frac{MAXINCR \times CURMHI \times TAXBASE}{CURMHV}$$

Maximum amount to be financed =

$$Above\ amount \times \frac{COMPYRS}{INTRATIO}$$

b. Revenue Debt

For cases involving a municipality with a relevant enterprise fund or publicly owned utility, MUNIPAY assesses the entity's ability to finance new revenue debt. As with general obligation debt, the model analyzes a series of ratios and threshold values based on debt stock, flows and household burdens to determine if the enterprise fund or utility can afford to take on new debt.

Specifically, the model analyzes four sets of ratios:

- User fee incremental burden
- User fee total burden
- Debt service coverage ratio
- Debt-to-equity ratio

As with general obligation scenarios, the model first calculates the existing values. It then analyzes the impact of the proposed new financing burden on these ratios, in order of the hierarchy of expenditures. If any of the projected ratios exceeds the threshold the model calculates the maximum affordable amount of new financing.[4]

The model contains default values for the revenue debt ratio thresholds, along with other parameters relevant to the analysis. The user must also provide input variables similar to the general obligation case. The parameters and input variables, together with their definitions and default values, appear in Exhibits A-8 and A-9. The formulas that the model uses for its analysis follow.

[4] The exception is the debt service coverage ratio, which divides an enterprise fund's net revenues (operating revenues minus operating expenses) by its principal and interest payments. The ratio indicates whether user fee levels are sufficient to generate a positive net income capable of adequately servicing the entity's existing level of debt. The model sets this ratio at 120 percent, and uses this minimum value to determine what increased level of user fees are necessary both to cover existing debt and to cover any proposed debt. Thus, unlike the other criteria in the model, the debt service coverage ratio is not a limit in itself but instead works in conjunction with the user fee burden criteria to become a limiting factor.

Exhibit A-8

PARAMETERS FOR AFFORDABILITY ANALYSIS
Revenue Debt

COMPYRS	Maturity period for bond to finance compliance capital and one-time costs (default = 25 yrs)
SUPYRS	Maturity period for note to finance Superfund cost contribution (default = 5 yrs)
PENYRS	Time period for penalty payment schedule (default = 3 yrs)
COMPINT	Revenue debt interest rate for compliance financing (default based on entity's bond rating, assuming a 25-yr bond)
SUPINT	Revenue debt interest rate for Superfund financing (default based on entity's bond rating, assuming a 5-yr note)
PENINT	Federal funds interest rate for penalty payment schedule (default is Federal funds rate)
GFMINVAL	Minimum value for General Fund unreserved balance as a percentage of budgeted/anticipated cash outflows (default = 5%)
EFMINVAL	Minimum value for enterprise fund working capital balance as a percentage of budgeted/anticipated cash outflows (default = 5%)
MAXINCR	Maximum value for increase in user charges on 90,000 gallon consumption as a percentage of median household income (default = 1.0%)
MAXVAL	Maximum value for total user charges on 90,000 gallon consumption as a percentage of median household income (default = 2.0%)
MINCOV	Minimum value for debt service coverage ratio (default = 120%)
MAXDTEQ	Maximum value for debt-to-equity ratio (default = 200%)

Exhibit A-9

INPUT VARIABLES FOR AFFORDABILITY ANALYSIS
Revenue Debt

COMPCAP	Amount sought for compliance capital and one-time expenditures
COMPANN	Amount sought for compliance annual expenditures
SUPERFUN	Amount sought for Superfund cleanup contribution
PENPAY	Amount sought for penalty payment
CURAST	Current assets
CURLIAB	Current liabilities
TOTLIA	Total liabilities
TOTEQ	Total equity
OPREV	Operating revenues
OPEXP	Operating expenses
CURREPAY	Annual principal and interest payments
CURFEE	Annual residential charges on 90,000 gallon consumption
SERVAREA	Number of serviced households
RESPOR	Residential portion of system revenue
RECMHI	Most recent estimate for median household income
MHIYR	Year for most recent median household income estimate
RECMHV	Most recent revenue debt rating
MHVYR	Year for most recent median home value estimate
CURDIR	Direct net debt
CUROVER	Overall net debt
RATING	Most recent general obligation debt rating

As with general obligation debt, MUNIPAY performs several preliminary calculations. For a list of the output variables and the formulas that derive them, see the preceding section for general obligation debt (specifically, Exhibit A-7 and formulas "a" through "e" immediately following the exhibit). Using these variables and the user's input variables, MUNIPAY calculates the existing and projected ratios for the criteria and tests them against the threshold values.

User Fee Burden Criteria

To test the two user fee burden criteria (incremental and total burden), the model first calculates the additional annual revenue requirements (REVREQ) for the sought amount of financing. This amount is then expressed in terms of the increased annual residential user fee burden per household (RESBUR). The model then calculates the incremental user fee increase and new user fee total burden as a percentage of median household income and tests these ratios against the specified thresholds.

Additional annual revenue requirements (REVREQ) =

$$\left[MINCOV \times (NEWSERV + CURREPAY)\right] - OPREV + OPEXP + COMPANN$$

Increased annual burden per household (RESBUR) =

$$REVREQ \times \frac{RESPOR}{SERVAREA}$$

Increased annual burden as a percentage of median household income =

$$\frac{RESBUR}{CURMHI} \times 100$$

Total user fee burden as a percentage of median household income =

$$\frac{(RESBUR + CURFEE)}{CURMHI} \times 100$$

If either of the two user fee criteria exceeds the threshold, MUNIPAY calculates the maximum user fee increase per household (MAXBUR). It then uses this amount to "work backwards" into an affordable amount that can be financed. First, the model translates the maximum per household fee into a system-wide total amount (MAXSYS), which is simply another way of expressing the maximum additional revenue requirements for the municipality. This amount is converted into the maximum additional annual debt service (DEBTSERV) that the municipality can afford. The model uses this debt service amount to calculate the maximum amount of new financing that the municipality can afford (AFFORD). Formulas for these calculations follow.

Maximum user fee increase per household (MAXBUR) = The lesser of:

$$MAXINCR \times CURMHI \text{ or } (MAXVAL \times CURMHI) - CURFEE$$

Maximum user fee increase, system-wide (MAXSYS) =

$$MAXBUR \times \frac{SERVAREA}{RESPOR}$$

Maximum affordable new debt service (DEBTSERV) =

$$\left(\frac{OPREV - OPEXP - COMPANN + MAXSYS}{MINCOV} \right) - CURPRIN - CURINT$$

Maximum affordable new financing (AFFORD) =

$$DEBTSERV \times \frac{YEARS}{INTRATIO}$$

Debt-to-Equity Criterion

Once the model establishes the maximum affordable amount to be financed based on the user fee criteria, it then tests this amount against the debt-to-equity threshold. The existing debt-to-equity ratio is defined simply as total liabilities divided by total equity:

$$\frac{TOTLIA}{TOTEQ}$$

Therefore, the projected debt-to-equity ratio =

$$\frac{TOTLIA + AFFORD}{TOTEQ}$$

If the projected debt-to-equity ratio is greater than the threshold, the model calculates the maximum amount that can be financed given the specified debt-to-equity limit, using the formula:

$$(MAXDTEQ \times TOTEQ) - TOTLIA$$

Phrases with underlining cross-reference other entries in the glossary. A bibliography for further reading follows on the final page.

Assets

Financial representation of economic resources owned by an organization or individual.

Balance

A fund's excess of assets over liabilities. Portions of the fund balance may be restricted, reserved, or designated.

Bond

A written promise of the issuer to pay a specified sum of money, called the face value or principal amount, at a specified date or dates in the future, called the maturity date, together with periodic interest at a specified rate.

Capital Projects Fund

A fund created for all resources used for the construction or acquisition of designated fixed assets by a governmental unit except those financed by special assessment, proprietary, or fiduciary funds.

Debt

An obligation resulting from the borrowing of money or from the purchase of goods and services. Debts of governmental units include bonds, time warrants, notes, and floating debt.

Debt Service Fund

A fund established to account for the accumulation of resources for, and the payment of, general obligation long-term debt principal and interest.

Designated Balance

The portion of a fund balance that is tentatively set aside for use in the future.

Direct Net Debt

Gross debt incurred directly in the name of the specific governmental unit, less debt fully supported from enterprise fund revenues (revenue debt), and short-term debt.

Enterprise Fund

A fund established to finance and account for the acquisition, operation, and maintenance of governmental facilities and services that are entirely or predominantly self-supported by user charges; or where the governing body of the governmental unit has decided that periodic determination of revenues earned, expenses incurred, and/or net income is appropriate. Government-owned utilities (e.g., water, sewer, electricity) and hospitals are ordinarily accounted for by enterprise funds.

Fiduciary Fund

Any fund held by a governmental unit in a fiduciary capacity, ordinarily as agent or trustee.

Flows

Processes occurring continuously through time, measured in units per time period. (Contrast with stocks.)

Fund

A fiscal and accounting entity with a self-balancing set of accounts recording cash and other financial resources, together with all related liabilities, and residual equities or balances, and charges therein, which are segregated for the purpose of carrying on specific activities or attaining certain objectives in accordance with special regulations, restrictions, or limitations.

Fund Balance

The excess of assets of a fund over its liabilities.

General Fund

A fund used to account for all transactions of a governmental unit that are not accounted for in another fund. The General Fund is used to account for the ordinary operations of a governmental unit that are financed from taxes and other general revenues.

General Obligation Bond

Bonds for whose payment the full faith and credit of the issuing body are pledged. More commonly, but not necessarily, general obligation bonds are considered to be those payable from taxes and other general revenues. In some states these bonds are called Tax Supported Bonds.

Governmental Fund

A generic classification that refers to all funds other than proprietary and fiduciary funds. Governmental fund-types includes the General Fund, special revenue funds, capital projects funds, debt service funds, and special assessment funds.

Internal Service Fund

A fund established to finance and account for services and commodities furnished by a designated department or agency to other department and agencies within a single governmental unit, or to other governmental units.

Liabilities

Debt or other legal obligations arising out of transactions in the past that must be liquidated, renewed, or refunded at some future date.

Long-Term Debt

Debt with a maturity of more than one year after the date of issuance.

Note

A written, relatively short-term promise to repay a specified principal amount of money at a specified date in the future, together with interest at a specified rate. Municipal notes usually mature in less than five years.

Overall Net Debt

Direct net debt of the specific governmental unit plus the net debt of overlapping and underlying units of government apportioned in accordance with property valuation. Although overlapping and underlying debt is not a liability of the specific governmental unit, it is supported by the same property tax base as the debt of the specific governmental unit, and therefore is an important factor in the ability of that unit to issue additional debt.

Proprietary Fund

A fund established to account for self-sustaining or profit-oriented activities. Includes enterprise funds and internal service funds.

Reserved Balance

The portion of a fund balance that is reserved either for inventories (representing non-liquid resources) or for encumbrances, which are monies that have been appropriated for a purchase but not yet expended.

Restricted Balance

The portion of a fund balance that is legally restricted to specified uses.

Revenue Debt

Debt whose principal and interest are payable exclusively from the earnings of an enterprise fund.

Short-Term Debt

Debt with a maturity of one year or less after the date of issuance. Short-term debt typically takes the form of a note.

Special Assessment Fund

A fund established to account for the construction of improvements or provision of services that are to be paid for, wholly or in part, from special assessments levied against benefitted property.

Special Revenue Fund

A fund established to account for revenues from specific taxes or other earmarked revenue sources that by law are restricted to the financing of particular functions or activities of government.

Stocks

Accumulated quantities existing at a particular time, measured in terms of units with no time dimension. (Contrast with flows. Also note that this meaning of the term "stocks" is not to be confused with its meaning as a synonym for a company's equity shares.)

BIBLIOGRAPHY FOR FURTHER READING

Berne, Robert and Richard Schramm, *The Financial Analysis of Governments* (1986).

Gauthier, Stephen J., *An Elected Official's Guide to Fund Balance* (Government Finance Officers Association, 1991).

Government Finance Officers Association, *Governmental Accounting, Auditing and Financial Reporting* (1994).

Groves, Sanford M. and Maureen Godsey Valente, *Evaluating Financial Condition: A Handbook for Local Government* (1994).

The Handbook of Municipal Bonds and Public Finance, eds. Robert Lamb, James Leigland, and Stephen Rappaport (1993).

Hay, Leon E. and Earl R. Wilson, *Accounting for Governmental and Nonprofit Entities* (1995).

Local Government Finance: Concepts and Practices, eds. John E. Petersen and Dennis R. Strachota (1991).

Management Policies in Local Government Finance, eds. J. Richard Aronson and Eli Schwartz (1987).

Martin, Joan K., *Urban Financial Stress: Why Cities Go Broke* (1982).

Moody's Investors Services, *Moody's on Municipals: An Introduction to Issuing Debt* (1991).

Standard and Poor's Corporation, *Municipal Finance Criteria* (1999).

The following sections provide a copy of the MUNIPAY data request forms, as well as explanations of the required data entries. Section A provides a copy of the request form for U.S. Census data, which MUNIPAY uses for its demographic analysis. Sections B and C then provide a copy of the financial data request form for a city, town, village, or county, and for a municipality with relevant enterprise fund or an independent and publicly owned utility.

MUNIPAY runs its affordability analysis on the data requested in either Section B or C, but not both. If you are unsure of what type of entity you are analyzing, you can provide the municipality with both sets of data request forms, and have it determine which is relevant. In general, your baseline assumption should be that the municipality is a city, town, or village (or a county, if that is the case). But for a Clean Water Act or Safe Water Drinking Act case, the entity is probably a "municipality with relevant enterprise fund," since municipalities typically account for their water and wastewater operations through an enterprise fund (which accounts for activities that operate more like a business).

For a Clean Water Act or Safe Water Drinking Act case that involves a regional authority not tied to any single municipality, choose "independent and publicly owned utility." (Note that this is not the same as a privately owned yet publicly regulated utility, for which no screening model exists.)

For Superfund cases, a municipality will sometimes have an enterprise fund that accounts for the operations of its municipal landfill. For RCRA cases, a municipality will sometimes have an enterprise fund that accounts for activities related to the violation. Both of these situations are fairly rare, however.

A. U.S. CENSUS DATA

Municipality & State: _____ ___	1980 Census Value	1990 Census Value
Population		
Number of Persons above age 17		
Number of Persons above age 64		
Number of Individuals Below 125% of Poverty		
Median Home Value		
Median Household Income		

U.S. Census data for 1980 is available at State Data Centers. A list of centers is available from the U.S. Bureau of the Census at (301) 457-4100.

U.S. Census data for 1990 is available at http://www.census.gov. Once you locate the Web site, click on the large "Search" button. Next, click on "Place Search". The following screen will give you the opportunity to type in the municipality's name. Then, select the correct municipality from the displayed list, and click on its "STF3A" table button. Select the relevant census tables by checking the boxes on the left side of the screen for each of the census titles for which you would like information; the table below indicates which titles you will need. After you have checked all of the necessary boxes, scroll to the top of the page and click "Submit". Finally, select a format to view the data (HTML format, Tab-delimited format, or CODATA format) and press "Submit". You should now have the 1990 U.S. Census data for the municipality.

Census Designation	Census Descriptor	MUNIPAY Input Used For
P1	Persons	Population
P13	Age	Number of Persons above age 17
P13	Age	Number of Persons above age 64
P121	Ratio of Income to Poverty Level	Number of Individuals Below 125% of Poverty
H61A	Median Value	Median Home Value
P80A	Median Household Income	Median Household Income

B. FINANCIAL DATA FOR CITY, TOWN, VILLAGE, OR COUNTY

In addition to the data items below, annual audited financial statements, general obligation bond prospectuses, and budgets should be provided for the last three years. (Note that if the municipality uses an enterprise fund to account for the activities related to the enforcement action, then the data described in Section C should instead be obtained.) Financial statements and bond prospectuses are also available for many cities from commercial providers. (One such provider is located on the internet at http://www.dpcdata.com.)

Most Recent Fiscal Year:	
General Fund **Unreserved** Ending Balance	
Total Principal and Interest Payments	
Total Revenues for all Governmental Funds [excluding transfers between such funds]	
Most Recent Estimates for:	
Market Value of Taxable Property	
Property Tax Collection Rate [%]	
Median Household Income & Year of Estimate	
Median Home Value & Year of Estimate	
Population & Year of Estimate	
Prior Estimate for Population & Year of Estimate	
Debt Statistics:	
Direct Net Debt	
Overall Net Debt	
Most Recent General Obligation Debt Rating	
State Limit for General Obligation Debt Level, if applicable	
Next Year's Budgeted/Anticipated General Fund Expenditures Plus Net Transfers Out	

Most Recent Fiscal Year:

General Fund Unreserved Ending Balance

From the most recent fiscal year's Combined Balance Sheet for All Fund Types and Account Groups, enter the General Fund's *unreserved ending balance*.

Total Principal and Interest Payments for all Governmental Funds

From the most recent fiscal year's Combined Statement of Revenues, Expenditures and Changes in Fund Balances for All Governmental Fund Types (i.e., General Fund, special revenue, capital projects, debt service, and special assessment), enter the sum (if stated separately) of *total principal and interest payments*.

Total Revenues for All Governmental Funds (excluding transfers between such funds)

From the most recent fiscal year's Combined Statement of Revenues, Expenditures and Changes in Fund Balances for All Governmental Fund Types (i.e., General Fund, special revenue, capital projects, debt service, and special assessment), enter the sum of *total revenues*. Be sure to exclude revenues that are simply transfers between governmental funds.

Most Recent Estimates for:

Market Value of Taxable Property

Enter the current total *market value of taxable property* within the municipality. Do not enter the assessed value. If you have to extrapolate from the assessed value to the market value, attach an explanation of your methodology and calculations.

Property Tax Collection Rate

Enter the *property tax collection rate*, expressed as a percentage. If you do not have an accurate estimate for the rate, simply enter 100.

Median Household Income

Enter the *median household income*, followed by the *year of estimate*. If you use the 1990 U.S. Census estimate, note that the year of the estimate is 1989 (not 1990). A more recent estimate is preferable to the U.S. Census value, though you should attach a notation of the source.

Median Home Value

Enter the *median home value*, followed by the *year of estimate*. A more recent estimate is preferable to the U.S. Census value, though you should attach a notation of the source.

Population

Enter the most recent estimate for the *population* of the municipality, plus the *year of estimate*. A more recent estimate is preferable to the U.S. Census value, though you should attach a notation of the source.

Prior Estimate for Population

Enter a *prior estimate for population*, and the *year of estimate*. Attach a notation of the source for the prior population estimate if it is not the U.S. Census value. (MUNIPAY requires a prior estimate so that it can estimate the current population by extrapolating to the present from the population growth over the time period between the two population estimates.)

Debt Statistics:

Direct Net Debt

Enter the value for the municipality's *direct net debt.* Direct net debt is equal to gross debt incurred directly in the name of the municipality, less debt fully supported from enterprise fund revenues (i.e., revenue debt), and short-term debt.

Overall Net Debt

Enter the value for the municipality's *overall net debt.* Overall net debt is equal to direct net debt of the municipality plus the net debt of overlapping and underlying units of government apportioned in accordance with property valuation. Attach a breakdown detailing the supporting calculation.

Most Recent General Obligation Debt Rating

Enter the *most recent General Obligation debt rating*.

State Limit for General Obligation Debt Level

Enter the *state limit for General Obligation debt level*. Attach an explanation of the limit's methodology and your calculations. If your state does not limit municipalities' debt levels, simply note it on the data form.

Next Year's Budgeted/Anticipated:

General Fund Expenditures Plus Net Transfers Out

Enter the sum of next year's budgeted or anticipated General Fund *expenditures plus net transfer out.* Attach either the relevant page from the official budget documents, or calculations for anticipated amounts based on prior years' increases.

C. FINANCIAL DATA FOR MUNICIPALITY WITH RELEVANT ENTERPRISE FUND; OR, INDEPENDENT AND PUBLICLY OWNED UTILITY

In addition to the data items below, annual audited financial statements, revenue bond prospectuses, and budgets should be provided for the last three years. (These are also available for many cities from commercial providers, one of which is on the internet at http://www.dpcdata.com.)

General Fund: (omit for an Independent and Publicly Owned Utility)	
General Fund **Unreserved** Ending Balance for Most Recent FY	
Next Year's Budgeted/Anticipated General Fund Expenditures Plus Net Transfers Out	
Balance Sheet for Most Recent Fiscal Year:	
Current Assets	
Current Liabilities	
Total Liabilities	
Total Equity	
Revenues & Expenses for Most Recent Fiscal Year:	
Operating Revenues	
Operating Expenses	
Most Recent Estimates for:	
Residential Portion of System Revenue	
Service Households	
Median Household Income and Year of Estimate	
Miscellaneous Data:	
Next Year's Budgeted/Anticipated Enterprise Fund Expenditures Plus Net Transfers Out	
Most Recent Revenue Debt Rating	
Annual Residential Charges on 90,000 Gallon Consumption	
Total Principal and Interest Payments	

General Fund:

Note that the following two entries are not applicable to an independent and publicly owned utility.

General Fund Unreserved Ending Balance

From the most recent fiscal year's Combined Balance Sheet for All Fund Types and Account Groups, enter the General Fund's *unreserved ending balance*.

Next Year's Budgeted/Anticipated General Fund Expenditures Plus Net Transfers Out

Enter the sum of next year's budgeted or anticipated General Fund *expenditures plus net transfers out.* Attach either the relevant page from the official budget documents, or calculations for anticipated amounts based on prior years' increases.

Balance Sheet for Most Recent Fiscal Year:

From the most recent fiscal year's Balance Sheet for the specified enterprise fund, enter the ***Current Assets*** (excluding any restricted assets), ***Current Liabilities*** (payable from current assets, excluding any liabilities payable from restricted assets), ***Total Liabilities***, and ***Total Equity***. Current assets can include such categories as cash and cash equivalents, investments, accounts receivable, and inventories. Current liabilities can include such categories as accounts payable, accrued expenses, current portion of long-term debt, accrued interest payable, and liability for compensated absences.

Revenues and Expenses for Most Recent Fiscal Year:

From the most recent fiscal year's statement of revenues, expenses, and changes in retained earnings, enter the total amounts for ***Operating Revenues*** and ***Operating Expenses***.

Most Recent Estimates for:

Residential Portion of System Revenue

Enter the *residential portion of system revenue*. If this figure is not available, then you can derive it by multiplying the average annual residential user charges by the number of serviced households, and then divide by the annual operating revenues. (Note that the average annual residential user charges are not necessarily the same as the annual residential user charges of 90,000 gallon consumption, but you may use the latter if the former is not known.)

Serviced Households

Enter the number of *serviced households*. Note that this is not necessarily the same as the number of accounts, which could overestimate the number of serviced households because of commercial accounts, or underestimate the number of serviced households because of multiple-

household apartment buildings that hold only one account. If an official estimate is not available, a reasonable approximation may be to divide the serviced population by the U.S. Census estimate for the number of persons per household.

Median Household Income

Enter the value of *median household income*, plus the *year of the estimate*. If you use the 1990 U.S. Census estimate, note that the year of the estimate is 1989 (not 1990). Attach a notation of the source if it is not the U.S. Census.

Miscellaneous Data:

Next Year's Budgeted/Anticipated Enterprise Fund Expenditures Plus Net Transfers Out

Enter the sum of next year's budgeted or anticipated Enterprise Fund *expenditures plus net transfers out.* Attach either the relevant page from the official budget documents, or calculations for anticipated amounts based on increases in prior years.

Most Recent Revenue Debt Rating

Enter the *most recent revenue debt rating*.

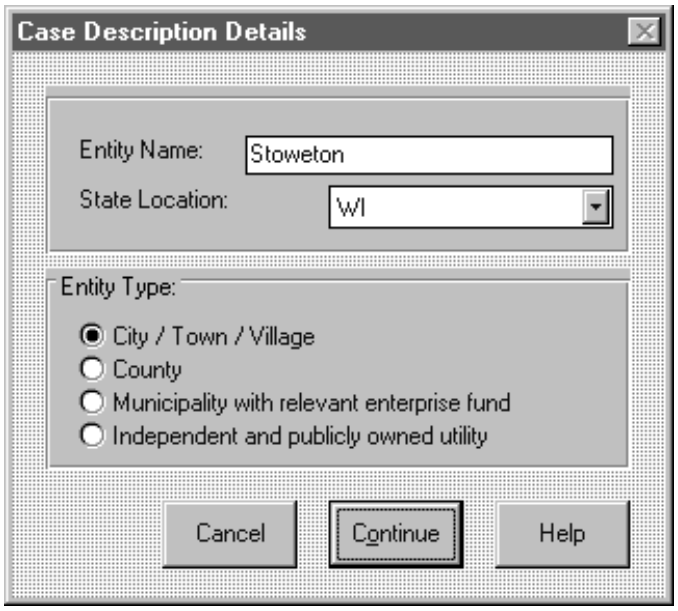
Annual Residential Charges on 90,000 Gallon Consumption

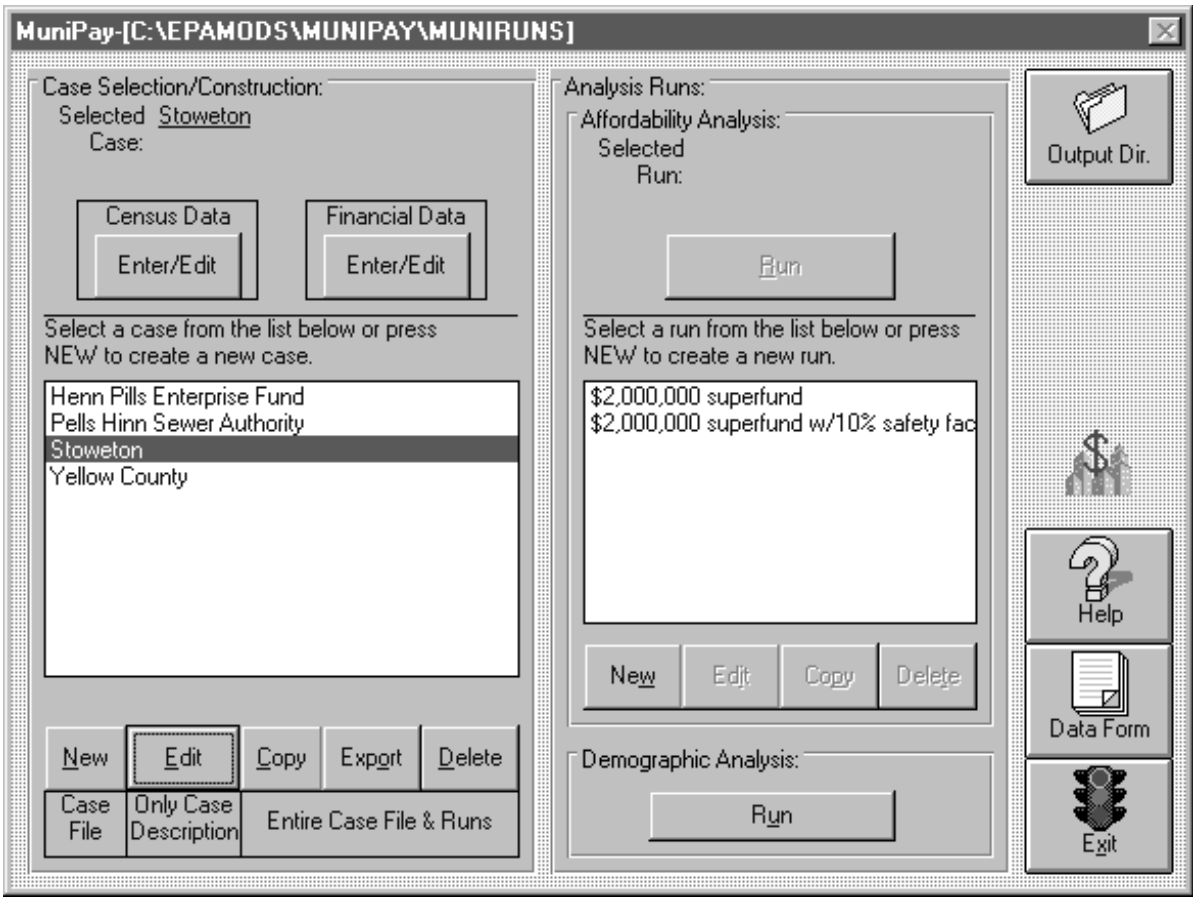
Enter the *annual residential charges on 90,000 gallon consumption*. If the enterprise fund accounts for operations other than drinking water or sewer treatment (e.g., a municipally owned electricity plant), enter the annual charges for a residence consuming the average level of services.

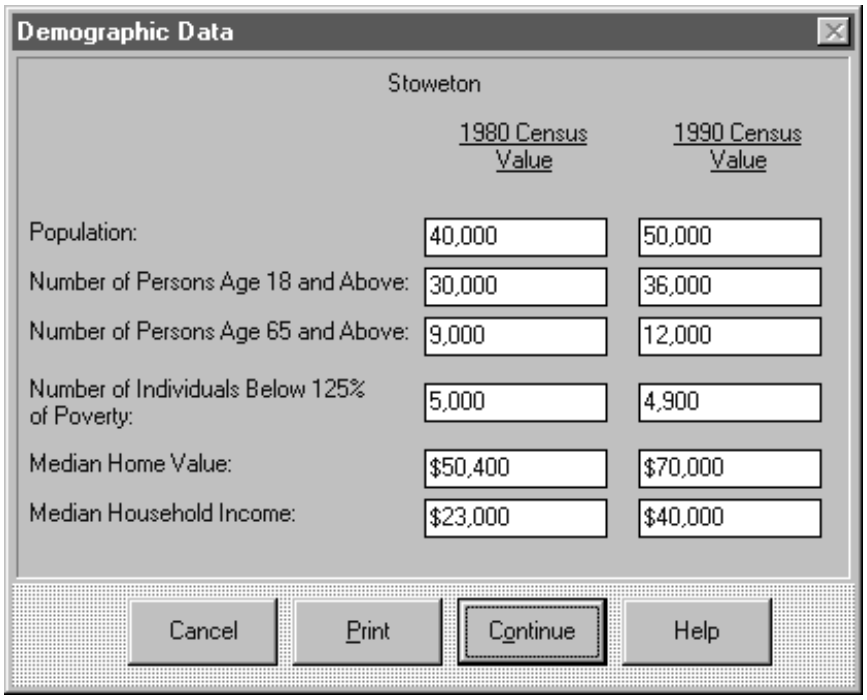
Total Principal and Interest Payments

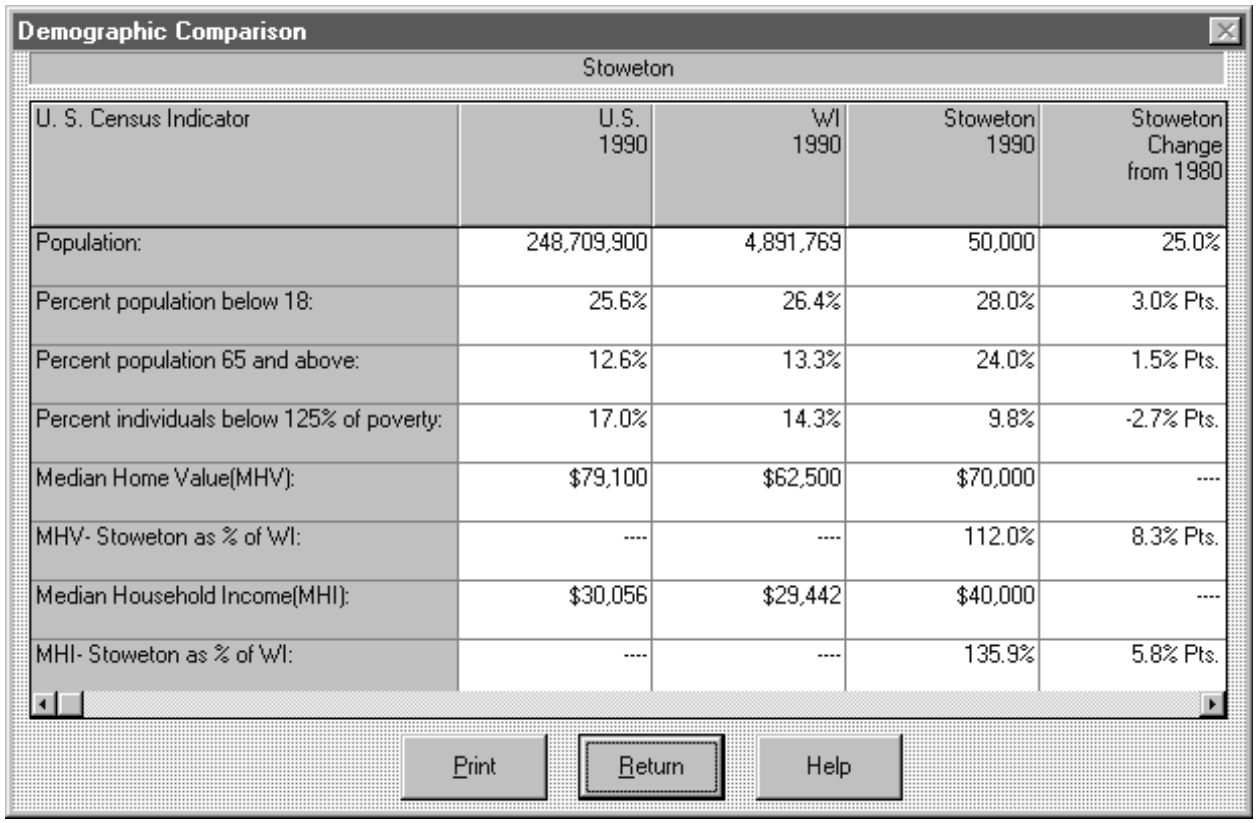
From the most recent fiscal year's statement of cash flows, enter the sum of *principal payments* and *interest payments*. You can usually find these under the heading of "Cash Flows from Financing Activities." Do not use the amount for "interest expense" from the statement of revenues, expenses, and changes in retained earnings.

The following pages provide all the screens for an example MUNIPAY analysis involving a city, town, or village. For a county, the analysis is identical, except the user should select "county" as the entity type in the case description.


Case Description Details
Entity Name:
Stoweton
State Location:
WI
Entity Type:
City / Town / Village
County
Municipality with relevant enterprise fund
Independent and publicly owned utility
Cancel
Continue
Help


MuniPay-[C:\EPAMODS\MUNIPAY\MUNIRUNS]
Case Selection/Construction:
Selected Case: Stoweton
Census Data
Enter/Edit
Financial Data
Enter/Edit
Select a case from the list below or press NEW to create a new case.
Henn Pills Enterprise Fund
Pells Hinn Sewer Authority
Stoweton
Yellow County
New
Edit
Copy
Export
Delete
Case File
Only Case Description
Entire Case File & Runs
Analysis Runs:
Affordability Analysis:
Selected Run:
Run
Select a run from the list below or press NEW to create a new run.
$2,000,000 superfund
$2,000,000 superfund w/10% safety fac
New
Edit
Copy
Delete
Demographic Analysis:
Run
Output Dir.
Help
Data Form
Exit


Demographic Data
Stoweton
1980 Census Value
1990 Census Value
Population:
40,000
50,000
Number of Persons Age 18 and Above:
30,000
36,000
Number of Persons Age 65 and Above:
9,000
12,000
Number of Individuals Below 125% of Poverty:
5,000
4,900
Median Home Value:
$50,400
$70,000
Median Household Income:
$23,000
$40,000
Cancel
Print
Continue
Help

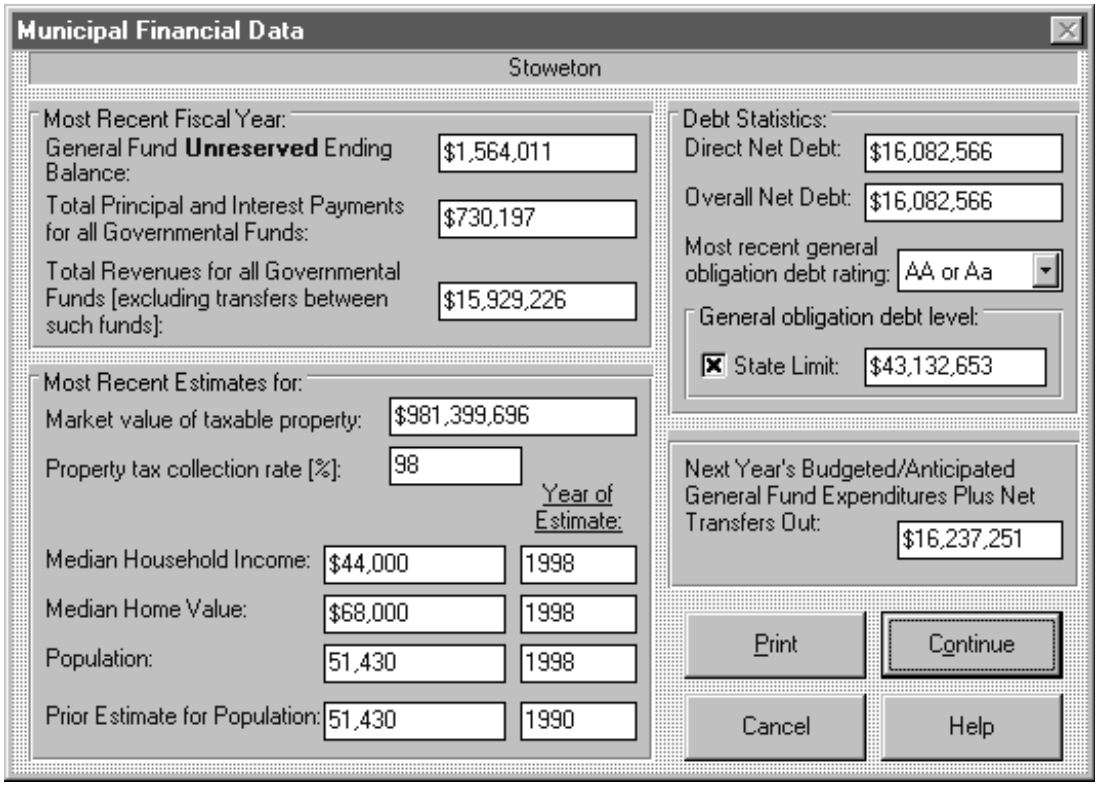


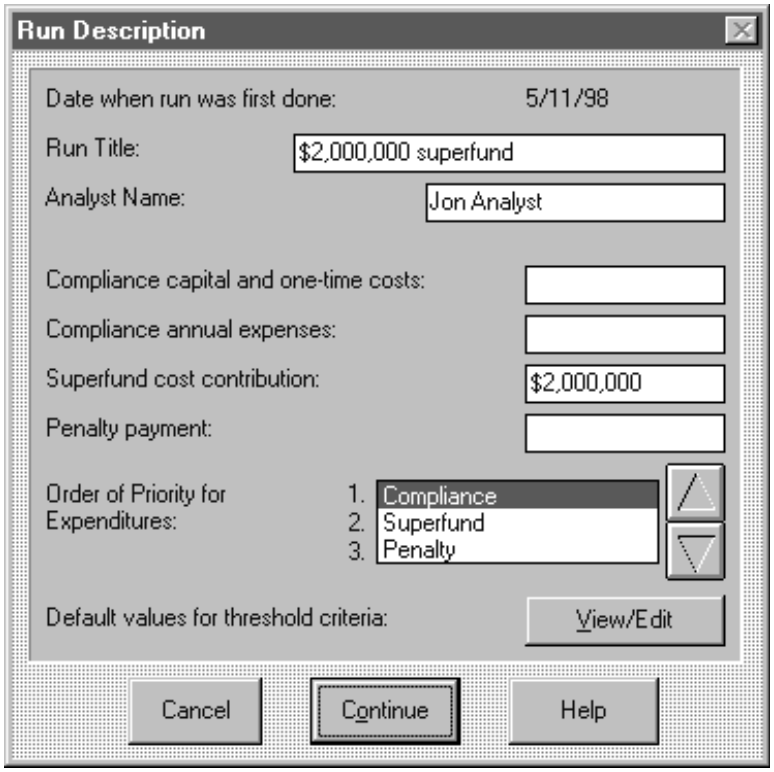
Demographic Comparison

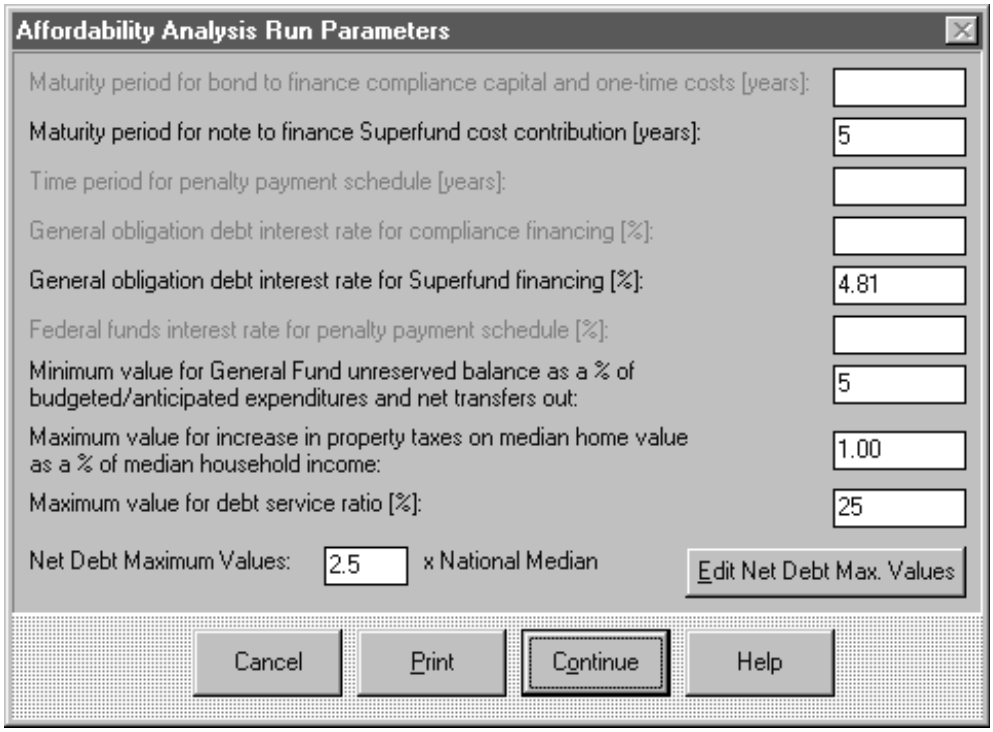
Stoweton

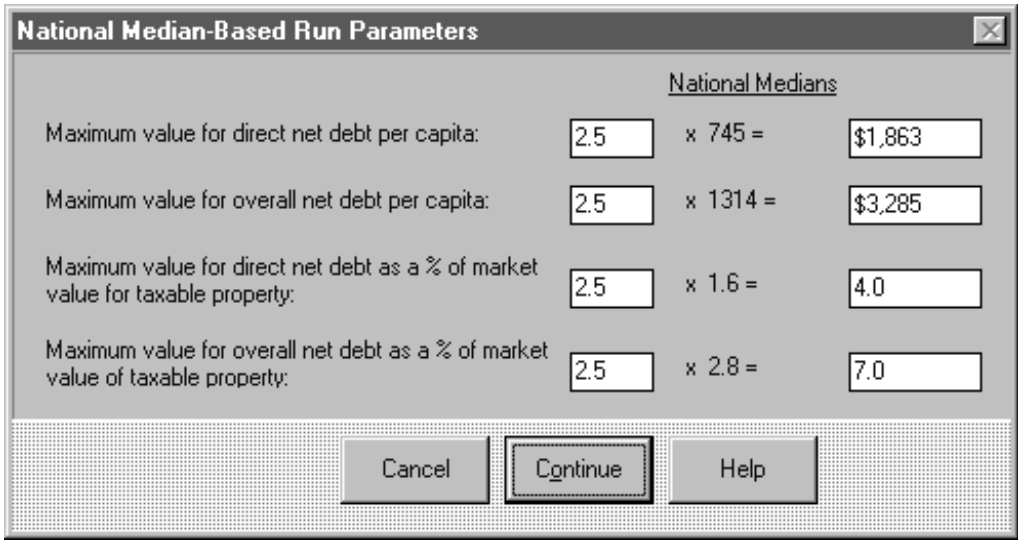
U. S. Census Indicator	U.S. 1990	WI 1990	Stoweton 1990	Stoweton Change from 1980
Population:	248,709,900	4,891,769	50,000	25.0%
Percent population below 18:	25.6%	26.4%	28.0%	3.0% Pts.
Percent population 65 and above:	12.6%	13.3%	24.0%	1.5% Pts.
Percent individuals below 125% of poverty:	17.0%	14.3%	9.8%	-2.7% Pts.
Median Home Value(MHV):	$79,100	$62,500	$70,000	----
MHV- Stoweton as % of WI:	----	----	112.0%	8.3% Pts.
Median Household Income(MHI):	$30,056	$29,442	$40,000	----
MHI- Stoweton as % of WI:	----	----	135.9%	5.8% Pts.

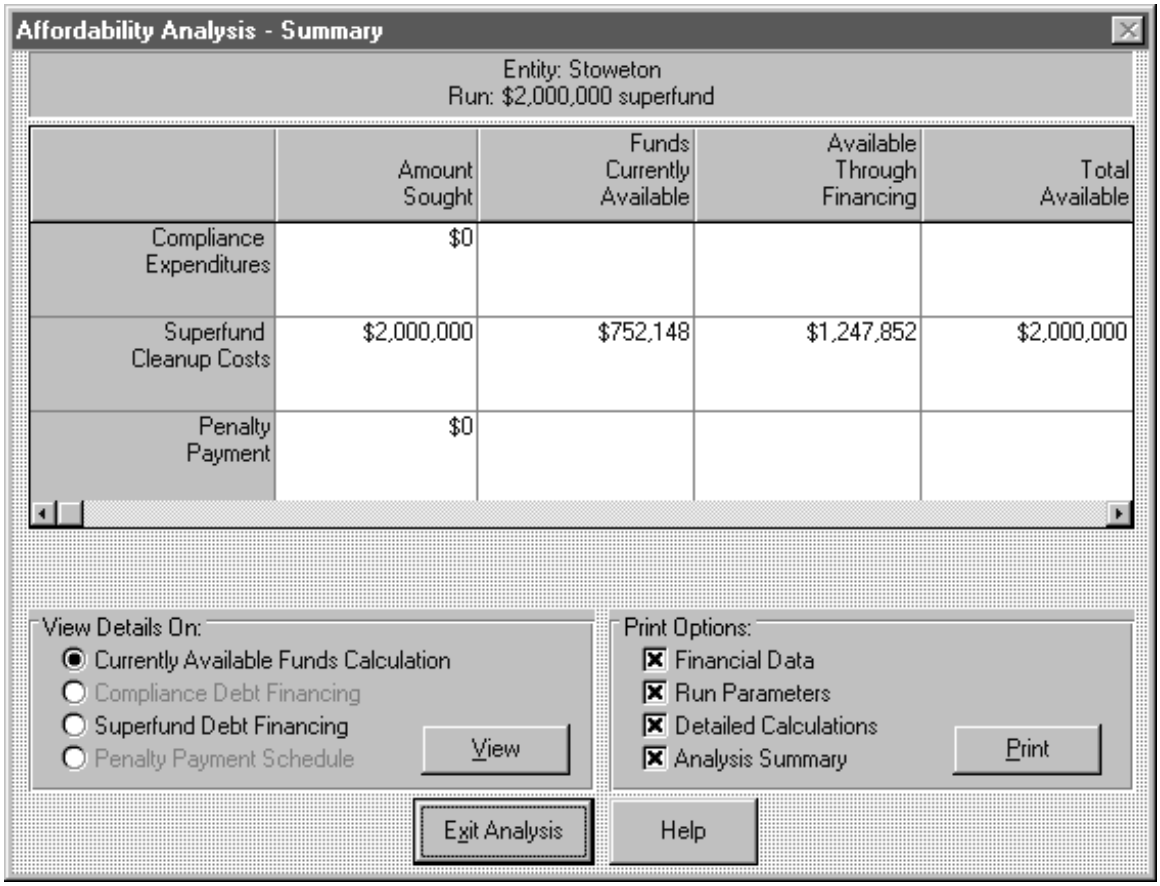
Print Return Help

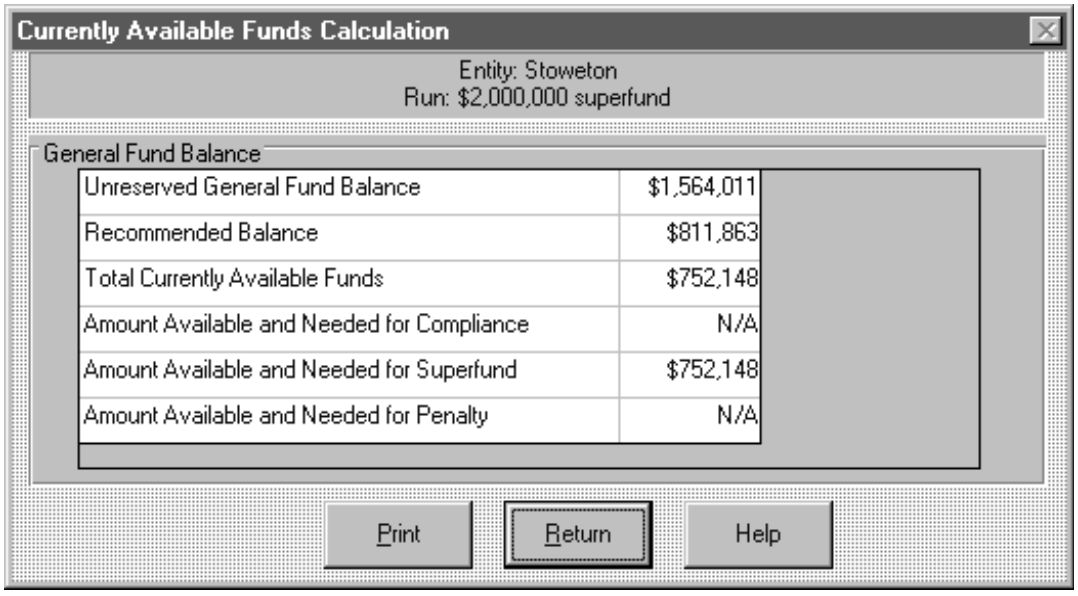

Municipal Financial Data
Stoweton
Most Recent Fiscal Year:
General Fund Unreserved Ending Balance:
$1,564,011
Total Principal and Interest Payments for all Governmental Funds:
$730,197
Total Revenues for all Governmental Funds [excluding transfers between such funds]:
$15,929,226
Most Recent Estimates for:
Market value of taxable property:
$981,399,696
Property tax collection rate [%]:
98
Year of Estimate:
Median Household Income:
$44,000
1998
Median Home Value:
$68,000
1998
Population:
51,430
1998
Prior Estimate for Population:
51,430
1990
Debt Statistics:
Direct Net Debt:
$16,082,566
Overall Net Debt:
$16,082,566
Most recent general obligation debt rating:
AA or Aa
General obligation debt level:
State Limit:
$43,132,653
Next Year's Budgeted/Anticipated General Fund Expenditures Plus Net Transfers Out:
$16,237,251
Print
Continue
Cancel
Help

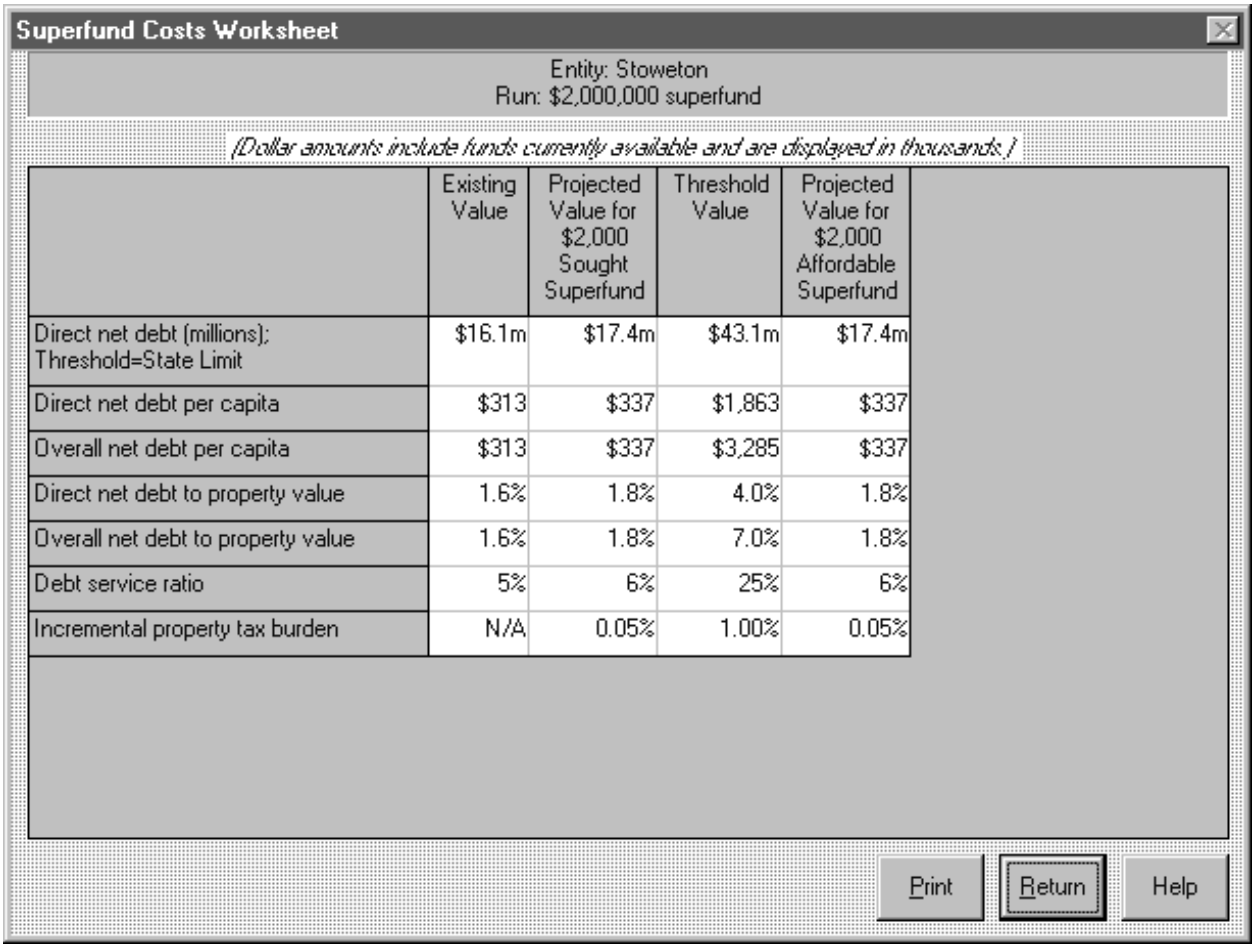

Run Description
Date when run was first done:
5/11/98
Run Title:
$2,000,000 superfund
Analyst Name:
Jon Analyst
Compliance capital and one-time costs:
Compliance annual expenses:
Superfund cost contribution:
$2,000,000
Penalty payment:
Order of Priority for Expenditures:
1. Compliance
2. Superfund
3. Penalty
Default values for threshold criteria:
View/Edit
Cancel
Continue
Help


Affordability Analysis Run Parameters
Maturity period for bond to finance compliance capital and one-time costs [years]:
Maturity period for note to finance Superfund cost contribution [years]:
5
Time period for penalty payment schedule [years]:
General obligation debt interest rate for compliance financing [%]:
General obligation debt interest rate for Superfund financing [%]:
4.81
Federal funds interest rate for penalty payment schedule [%]:
Minimum value for General Fund unreserved balance as a % of budgeted/anticipated expenditures and net transfers out:
5
Maximum value for increase in property taxes on median home value as a % of median household income:
1.00
Maximum value for debt service ratio [%]:
25
Net Debt Maximum Values:
2.5
x National Median
Edit Net Debt Max. Values
Cancel
Print
Continue
Help


National Median-Based Run Parameters
National Medians
Maximum value for direct net debt per capita:
2.5
x 745 =
$1,863
Maximum value for overall net debt per capita:
2.5
x 1314 =
$3,285
Maximum value for direct net debt as a % of market value for taxable property:
2.5
x 1.6 =
4.0
Maximum value for overall net debt as a % of market value of taxable property:
2.5
x 2.8 =
7.0
Cancel
Continue
Help

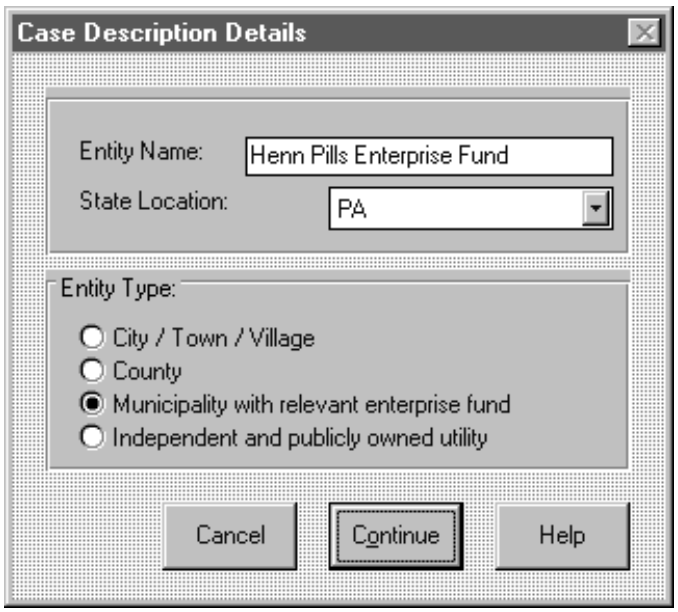

Affordability Analysis - Summary
Entity: Stoweton
Run: $2,000,000 superfund
Amount Sought
Funds Currently Available
Available Through Financing
Total Available
Compliance Expenditures
$0
Superfund Cleanup Costs
$2,000,000
$752,148
$1,247,852
$2,000,000
Penalty Payment
$0
View Details On:
Currently Available Funds Calculation
Compliance Debt Financing
Superfund Debt Financing
Penalty Payment Schedule
View
Print Options:
Financial Data
Run Parameters
Detailed Calculations
Analysis Summary
Print
Exit Analysis
Help

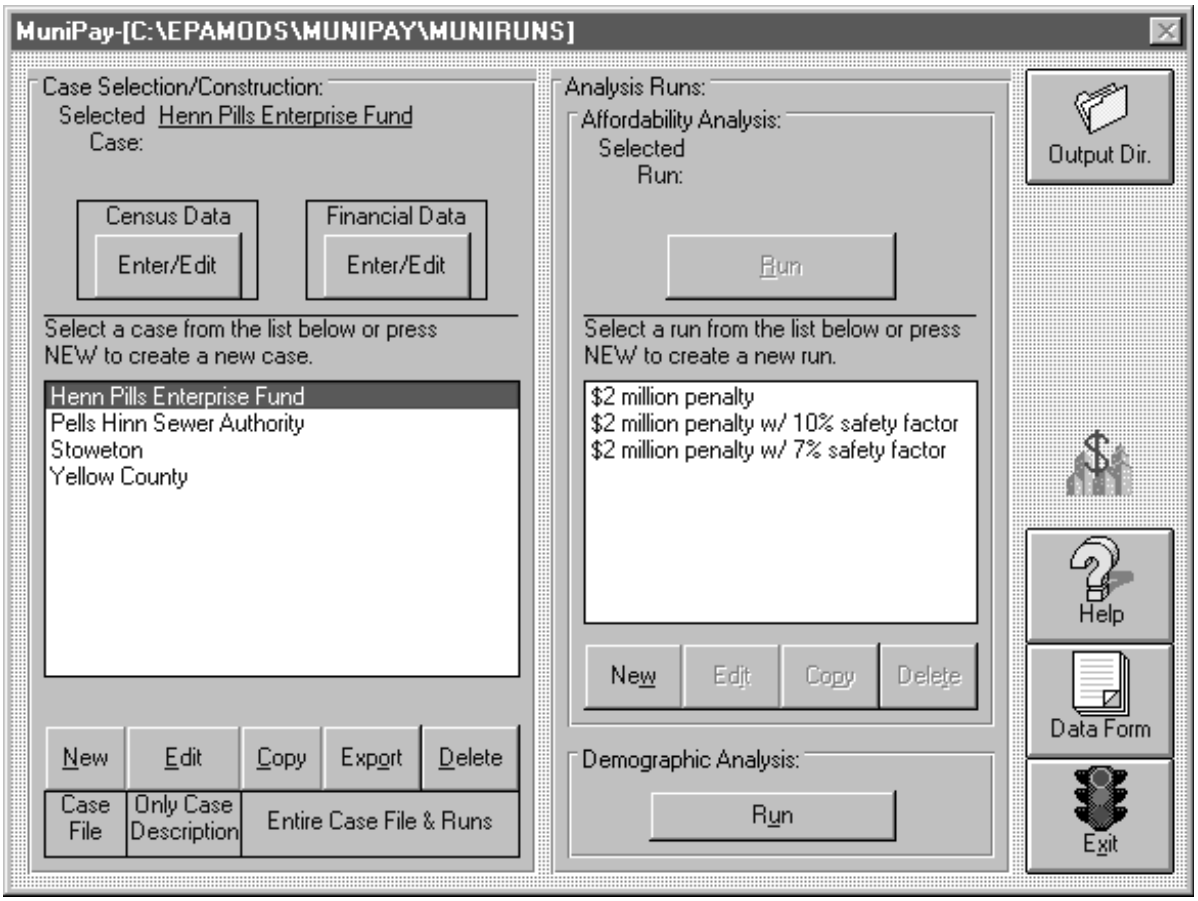

Currently Available Funds Calculation
Entity: Stoweton
Run: $2,000,000 superfund
General Fund Balance
Unreserved General Fund Balance $1,564,011
Recommended Balance $811,863
Total Currently Available Funds $752,148
Amount Available and Needed for Compliance N/A
Amount Available and Needed for Superfund $752,148
Amount Available and Needed for Penalty N/A
Print
Return
Help

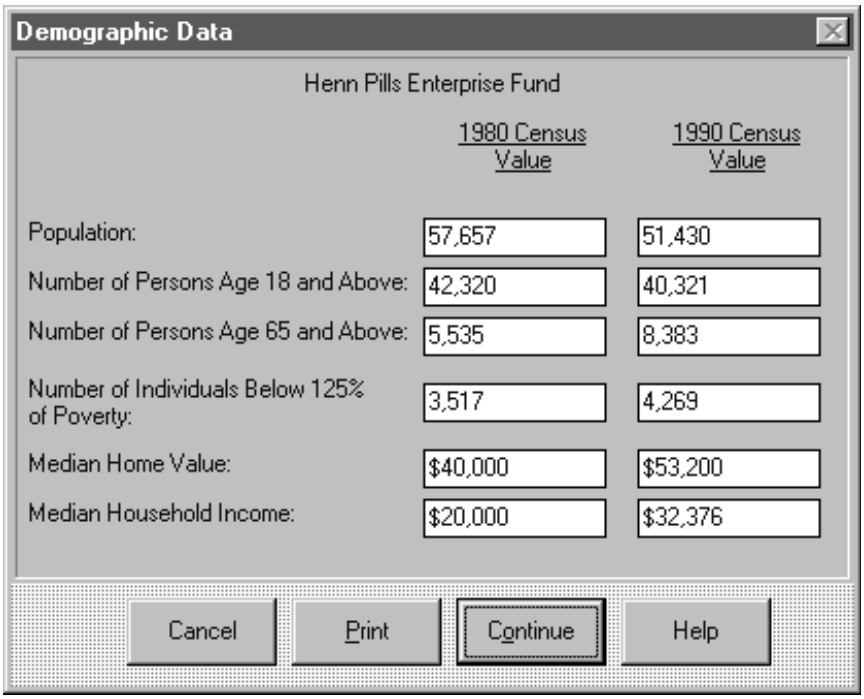

Superfund Costs Worksheet
Entity: Stoweton
Run: $2,000,000 superfund
(Dollar amounts include funds currently available and are displayed in thousands.)
Existing Value
Projected Value for $2,000 Sought Superfund
Threshold Value
Projected Value for $2,000 Affordable Superfund
Direct net debt (millions); Threshold=State Limit
$16.1m
$17.4m
$43.1m
$17.4m
Direct net debt per capita
$313
$337
$1,863
$337
Overall net debt per capita
$313
$337
$3,285
$337
Direct net debt to property value
1.6%
1.8%
4.0%
1.8%
Overall net debt to property value
1.6%
1.8%
7.0%
1.8%
Debt service ratio
5%
6%
25%
6%
Incremental property tax burden
N/A
0.05%
1.00%
0.05%
Print
Return
Help

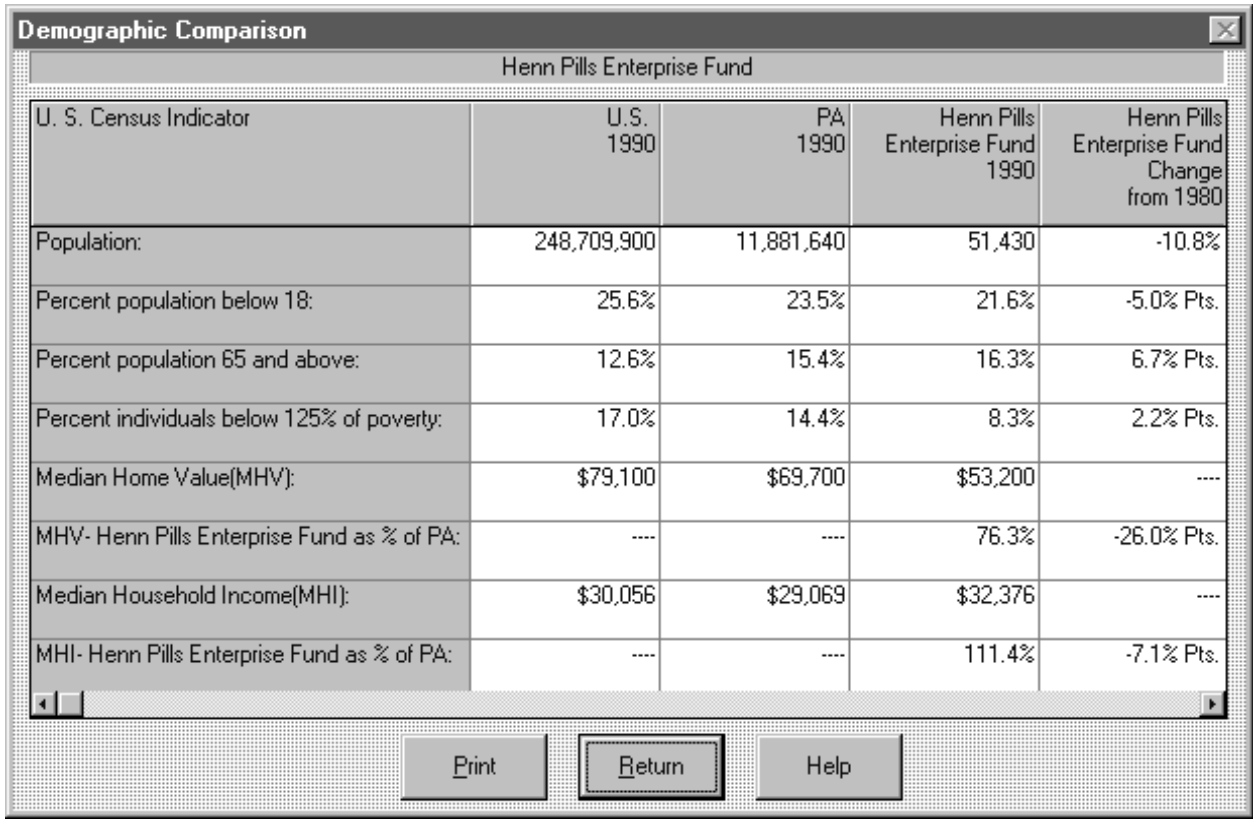
EXAMPLE FOR MUNICIPALITY WITH ENTERPRISE FUND APPENDIX E

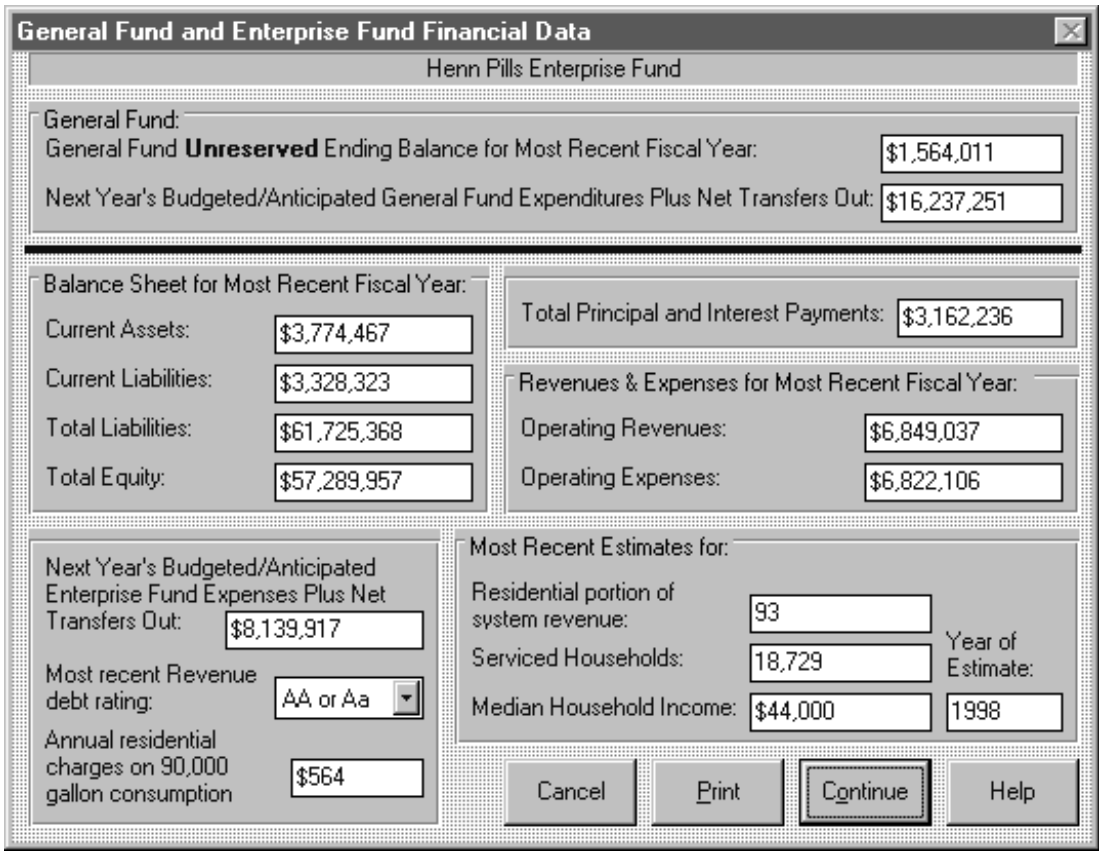
The following pages provide all the screens for an example MUNIPAY analysis involving a municipality with a relevant enterprise fund. For an independent and publicly owned utility, the analysis is identical, except for the omission of the currently available funds calculation for the General Fund.

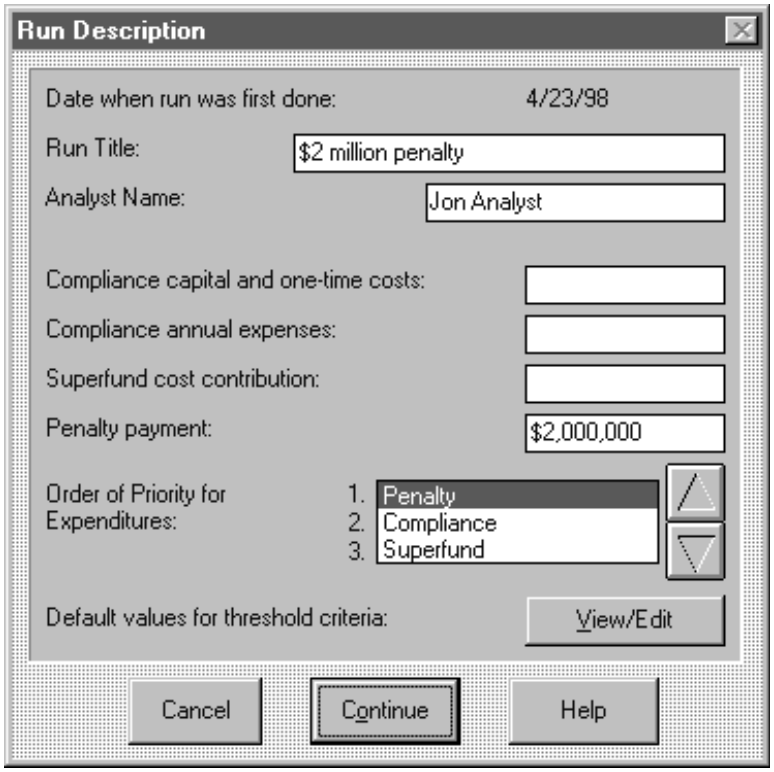

Case Description Details
Entity Name:
Henn Pills Enterprise Fund
State Location:
PA
Entity Type:
City / Town / Village
County
Municipality with relevant enterprise fund
Independent and publicly owned utility
Cancel
Continue
Help

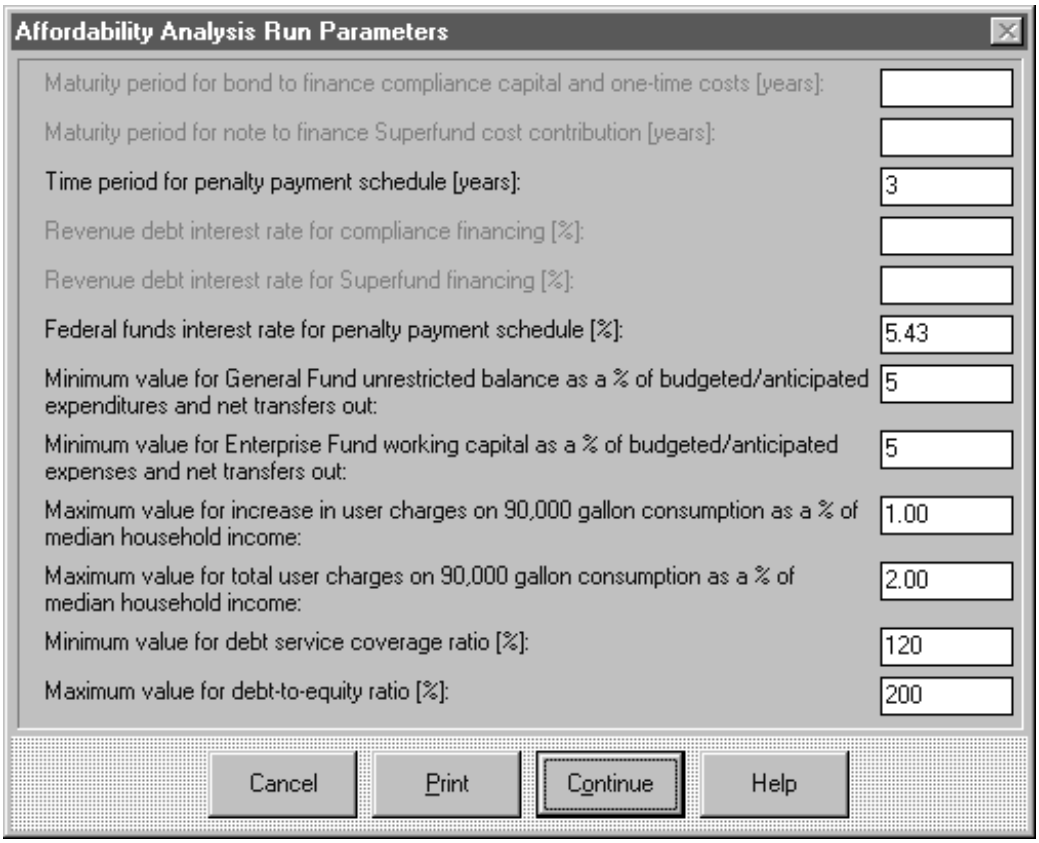

MuniPay-[C:\EPAMODS\MUNIPAY\MUNIRUNS]
Case Selection/Construction:
Selected Case:
Henn Pills Enterprise Fund
Census Data
Enter/Edit
Financial Data
Enter/Edit
Select a case from the list below or press NEW to create a new case.
Henn Pills Enterprise Fund
Pells Hinn Sewer Authority
Stoweton
Yellow County
New
Edit
Copy
Export
Delete
Case File
Only Case Description
Entire Case File & Runs
Analysis Runs:
Affordability Analysis:
Selected Run:
Run
Select a run from the list below or press NEW to create a new run.
$2 million penalty
$2 million penalty w/ 10% safety factor
$2 million penalty w/ 7% safety factor
New
Edit
Copy
Delete
Demographic Analysis:
Run
Output Dir.
Help
Data Form
Exit

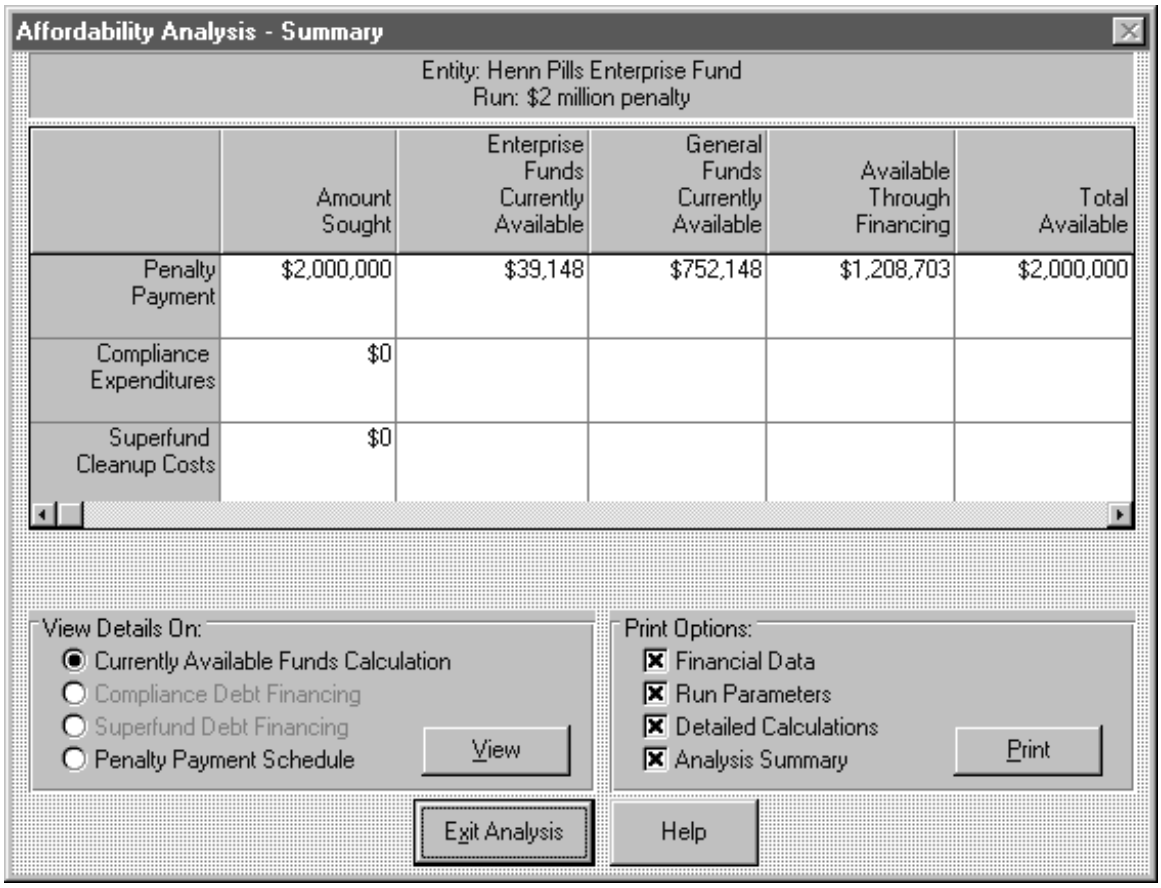

Demographic Data
Henn Pills Enterprise Fund
1980 Census Value
1990 Census Value
Population:
57,657
51,430
Number of Persons Age 18 and Above:
42,320
40,321
Number of Persons Age 65 and Above:
5,535
8,383
Number of Individuals Below 125% of Poverty:
3,517
4,269
Median Home Value:
$40,000
$53,200
Median Household Income:
$20,000
$32,376
Cancel
Print
Continue
Help

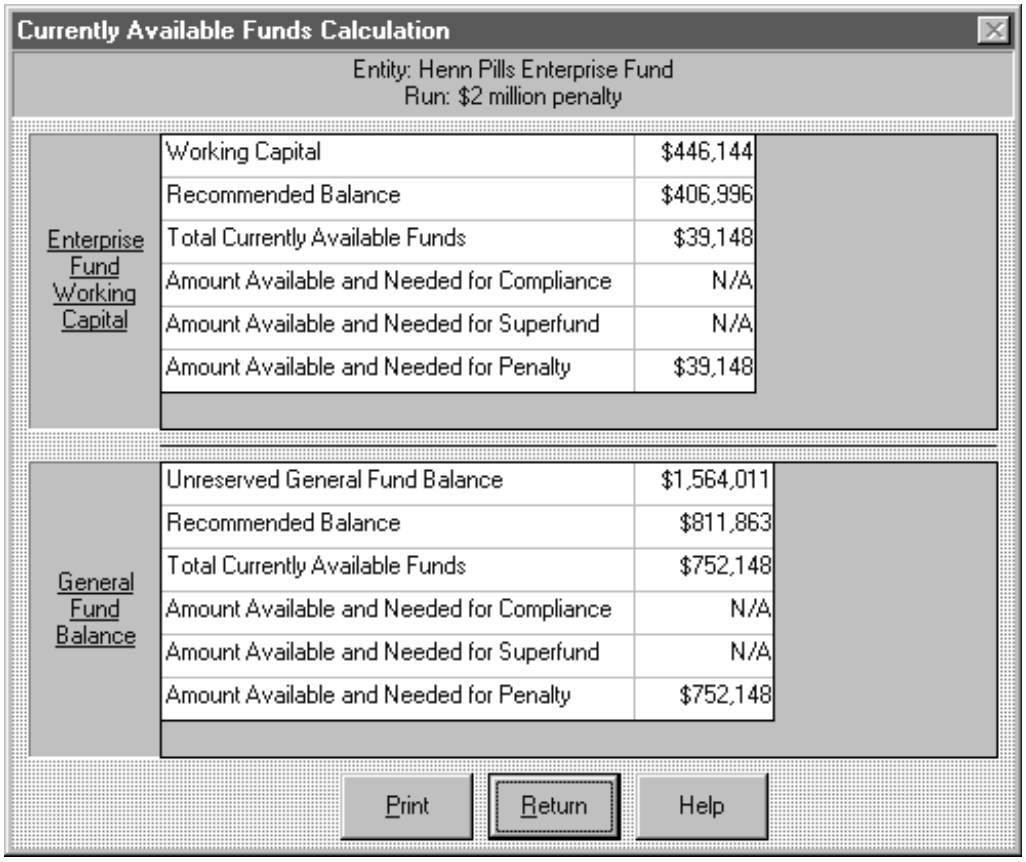

Demographic Comparison
Henn Pills Enterprise Fund
U. S. Census Indicator
U.S. 1990
PA 1990
Henn Pills Enterprise Fund 1990
Henn Pills Enterprise Fund Change from 1980
Population: 248,709,900 11,881,640 51,430 -10.8%
Percent population below 18: 25.6% 23.5% 21.6% -5.0% Pts.
Percent population 65 and above: 12.6% 15.4% 16.3% 6.7% Pts.
Percent individuals below 125% of poverty: 17.0% 14.4% 8.3% 2.2% Pts.
Median Home Value(MHV): $79,100 $69,700 $53,200 ----
MHV- Henn Pills Enterprise Fund as % of PA: ---- ---- 76.3% -26.0% Pts.
Median Household Income(MHI): $30,056 $29,069 $32,376 ----
MHI- Henn Pills Enterprise Fund as % of PA: ---- ---- 111.4% -7.1% Pts.
Print
Return
Help

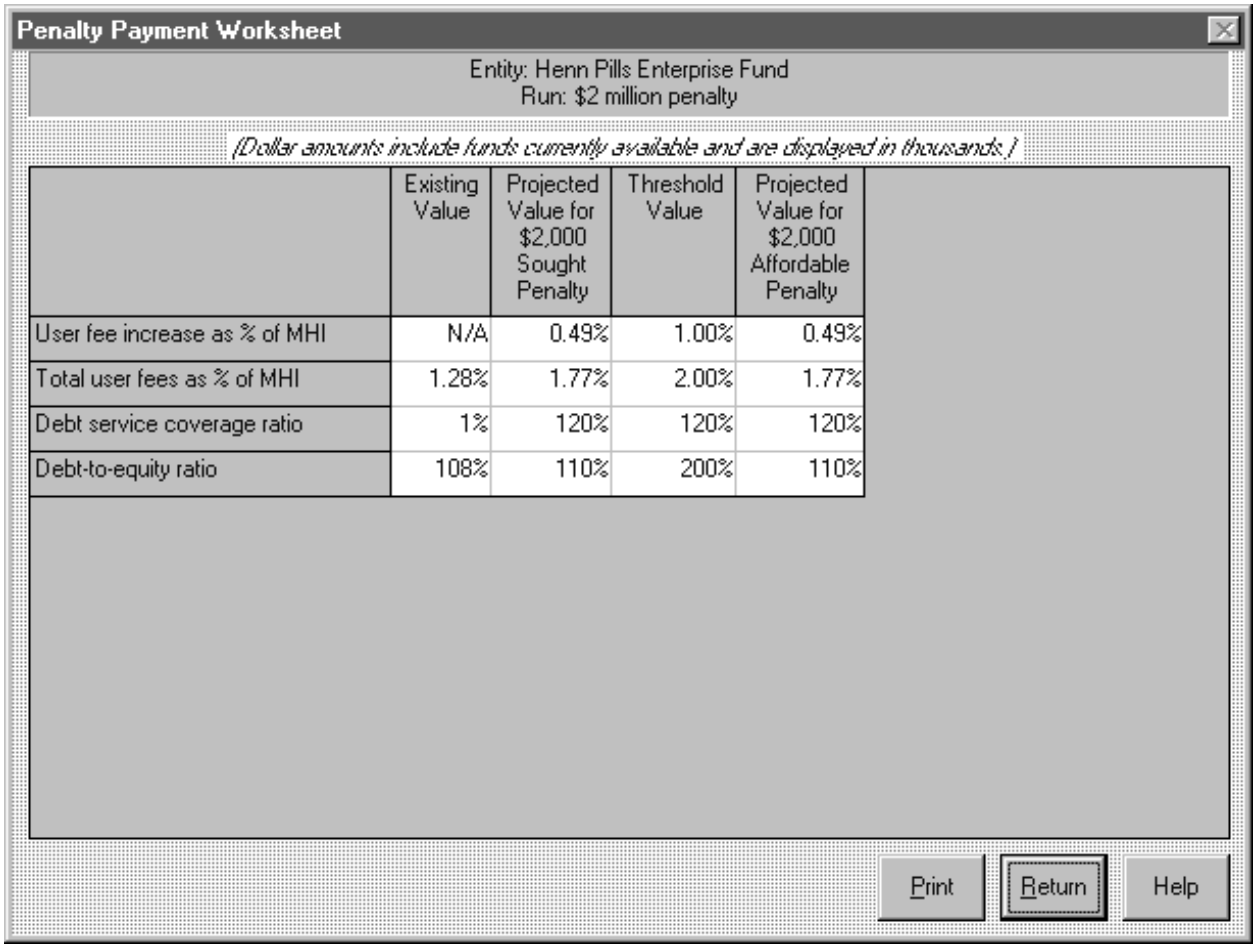

General Fund and Enterprise Fund Financial Data
Henn Pills Enterprise Fund
General Fund:
General Fund Unreserved Ending Balance for Most Recent Fiscal Year:
$1,564,011
Next Year's Budgeted/Anticipated General Fund Expenditures Plus Net Transfers Out:
$16,237,251
Balance Sheet for Most Recent Fiscal Year:
Current Assets:
$3,774,467
Current Liabilities:
$3,328,323
Total Liabilities:
$61,725,368
Total Equity:
$57,289,957
Total Principal and Interest Payments:
$3,162,236
Revenues & Expenses for Most Recent Fiscal Year:
Operating Revenues:
$6,849,037
Operating Expenses:
$6,822,106
Next Year's Budgeted/Anticipated Enterprise Fund Expenses Plus Net Transfers Out:
$8,139,917
Most recent Revenue debt rating:
AA or Aa
Annual residential charges on 90,000 gallon consumption
$564
Most Recent Estimates for:
Residential portion of system revenue:
93
Serviced Households:
18,729
Median Household Income:
$44,000
Year of Estimate:
1998
Cancel
Print
Continue
Help


Run Description
Date when run was first done:
4/23/98
Run Title:
$2 million penalty
Analyst Name:
Jon Analyst
Compliance capital and one-time costs:
Compliance annual expenses:
Superfund cost contribution:
Penalty payment:
$2,000,000
Order of Priority for Expenditures:
1. Penalty
2. Compliance
3. Superfund
Default values for threshold criteria:
View/Edit
Cancel
Continue
Help


Affordability Analysis Run Parameters
Maturity period for bond to finance compliance capital and one-time costs [years]:
Maturity period for note to finance Superfund cost contribution [years]:
Time period for penalty payment schedule [years]:
3
Revenue debt interest rate for compliance financing [%]:
Revenue debt interest rate for Superfund financing [%]:
Federal funds interest rate for penalty payment schedule [%]:
5.43
Minimum value for General Fund unrestricted balance as a % of budgeted/anticipated expenditures and net transfers out:
5
Minimum value for Enterprise Fund working capital as a % of budgeted/anticipated expenses and net transfers out:
5
Maximum value for increase in user charges on 90,000 gallon consumption as a % of median household income:
1.00
Maximum value for total user charges on 90,000 gallon consumption as a % of median household income:
2.00
Minimum value for debt service coverage ratio [%]:
120
Maximum value for debt-to-equity ratio [%]:
200
Cancel
Print
Continue
Help


Affordability Analysis - Summary
Entity: Henn Pills Enterprise Fund
Run: $2 million penalty
Amount Sought
Enterprise Funds Currently Available
General Funds Currently Available
Available Through Financing
Total Available
Penalty Payment
$2,000,000
$39,148
$752,148
$1,208,703
$2,000,000
Compliance Expenditures
$0
Superfund Cleanup Costs
$0
View Details On:
Currently Available Funds Calculation
Compliance Debt Financing
Superfund Debt Financing
Penalty Payment Schedule
View
Print Options:
Financial Data
Run Parameters
Detailed Calculations
Analysis Summary
Print
Exit Analysis
Help


Currently Available Funds Calculation
Entity: Henn Pills Enterprise Fund
Run: $2 million penalty
Enterprise Fund Working Capital
Working Capital $446,144
Recommended Balance $406,996
Total Currently Available Funds $39,148
Amount Available and Needed for Compliance N/A
Amount Available and Needed for Superfund N/A
Amount Available and Needed for Penalty $39,148
General Fund Balance
Unreserved General Fund Balance $1,564,011
Recommended Balance $811,863
Total Currently Available Funds $752,148
Amount Available and Needed for Compliance N/A
Amount Available and Needed for Superfund N/A
Amount Available and Needed for Penalty $752,148
Print
Return
Help



Penalty Payment Worksheet

Entity: Henn Pills Enterprise Fund
Run: $2 million penalty

(Dollar amounts include funds currently available and are displayed in thousands.)

	Existing Value	Projected Value for $2,000 Sought Penalty	Threshold Value	Projected Value for $2,000 Affordable Penalty
User fee increase as % of MHI	N/A	0.49%	1.00%	0.49%
Total user fees as % of MHI	1.28%	1.77%	2.00%	1.77%
Debt service coverage ratio	1%	120%	120%	120%
Debt-to-equity ratio	108%	110%	200%	110%

Print Return Help